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BEENA SHAH & PRADEEP KUMAR MISRA

Technical Education

— Historical Review and Future Prospects

R. PRABHAKARA RAYA

Organizing a Management School

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Home Science in Higher Education

— Some Misconceptions

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Economizing on the Answer Books

MURARI PRASAD

The Shadow Lines

— A Quest for 'Indivisible Sanity'

V.N. NARAYANAN

The Moral Energy

— Convocation Address

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Editor :
SUTINDER SINGH

Technical Education

Historical Review and Future Prospects

Beena Shah*
Pradeep Kumar Misra**

The main focus in the eighth five year plan was placed on human resource development because human resource is the key to all facets of development whether it is social, political, economic, national or international. In the present context the economist Julian Simon's view that 'human resource is the ultimate resource', seems fully appropriate.

In the Programme of Action (1986), it is stated that "technical education is one of the most significant components of human resource development spectrum with great potential for adding value products and services and for contributing to the national economy and improving quality of life of the people." Technical education curricula include preparation in supporting sciences and mathematics in addition to an emphasis on the field of technical specialisation, such as electronics, mechanics, chemistry, or aeronautics. Instructional programmes for this education, generally combine classroom instruction, laboratory experiences, and supervised work experiences.

After taking technical education, it is assumed that one should be able to assist in engineering functions such as designing, developing, testing, and modifying of products and processes; production, planning, writing reports, and preparing estimates; analyzing and diagnosing technical problems that involve independent decisions; and solving a wide range of technical problems by applying his or her background in other technical specialties. After discussing these aspects, it is clear that technical education is a basic and essential input for national development and for strengthening of our industry, economy and the quality of life of our people.

As a result of the efforts made during the successive five year plans in the development of technical education, the expansion of technical education in our country has been phenomenal during the past four decades. The present situation of technical education in our country is shown in Tables 1 & 2.

Table-1 : Technical Education: Institutions, Enrolment & Faculty

Name	No. of Instns.	Total Enrolment	Total Teachers
IITs, IISc & Universities	10	20,000	3,000
RECs	17	20,000	2,100
Big Colleges	25	30,000	2,800
Other Colleges	350	2,30,000	22,100

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**Table-2 Technical Education : State Wise
Intake & Out-turn**

<i>Name of State</i>	<i>No. of Colleges</i>	<i>Intake</i>	<i>Out-turn</i>
Northern Region			
Delhi	4	899	706
Jammu & Kashmir	1	48	77
Himachal Pradesh	1	116	84
Chandigarh	3	434	346
Haryana	3	637	535
Punjab	4	694	539
Rajasthan	5	1291	1083
Uttar Pradesh	18	3084	2595
Total	39	7203	5965
Eastern Region			
West Bengal	13	2518	2156
Bihar	8	994	978
Orissa	4	765	545
Tripura	1	120	117
Assam	4	657	490
Total	30	5054	4286
Western Region			
Gujarat	11	2700	2419
Madhya Pradesh	13	2135	1833
Maharashtra	78	16117	8788
Goa	1	149	113
Total	103	21101	13153
Southern Region			
Andhra Pradesh	28	6437	4505
Karnataka	46	16933	8989
Kerala	9	16933	8989
Tamil Nadu	43	8518	6907
Pondicherry	1	120	94
Total	127	34616	22638
Gross Total	299	69974	46042

Source for Tables 1 & 2 : The Indian Journal of Technical Education, Vol. 18, No. 4, Oct. -Dec. , 1994, Pp 8-9.

Historical Review

In India, technical education was started in 1847 with the establishment of Thomson Civil Engineering College at Roorkee for training of technicians. This was followed by Seepore College, Calcutta (1851) & Madras Civil Engineering College (1862). The main objectives of these colleges were to train the middle level technical manpower for public work departments & municipalities in provincial states and the absorbent of products in lower & upper subordinate services. In pre-independence period as well as after independence, various educational commissions & committees made highly practical and research oriented recommendations for technical education in the country. The main recommendations of various commissions/committees for technical education are discussed below in brief.

In 1913, Government Resolution on Educational Policy made recommendations for inclusion of subjects of industrial importance in the curriculum. Hartog Committee (1928-29) suggested the diversion of more boys to industrial and commercial careers at the end of middle stage, for which provision should be made by alternative courses in that stage, preparatory to special instruction in technical and industrial schools.

After Independence, the University Education Commission (1948-49) critically reviewed the situation of technical education in our educational institutes and recommended that "the number of engineering schools of different grades be increased particularly for training of foremen, craftsmen, draftsmen, overseers etc. In establishing new engineering colleges or institutes there should be fresh, critical enquiry as to the type of engineering services needed in India. Uncritical repetition and imitation of existing institutions here and abroad should be avoided".

In 1948 AICTE with the help of board of studies (in Engineering & Metallurgy, Chemical Engineering & Technology and Textile Technology) reviewed the situation of polytechnic education in India. It laid down the norms for accommodation, workshops, laboratory and staff required. After the year 1950 most of the polytechnics have strictly followed these norms.

According to Secondary Education Commission (1952-53) polytechnics or technological institutions

covering technical courses in two or more years would be established after completion of secondary education for those students who would be enthusiastic to pursue technical education.

In view of Kothari Commission (1964-66) "Education is the most powerful instrument of national development" and for follow-up of this view it was advocated that more emphasis should be laid on technical education.

In 1970-71 a special committee for "Reorganization of Polytechnic Education" named as "Damodaran Committee" was set up which went into all aspects of technical education and suggested consolidation and quality improvement programmes. Standardization of polytechnic education, autonomy of state boards, examination reforms, sandwich courses, entrepreneurship programmes were major reforms recommended by the committee. Like other reports, this was only partly implemented because several states did not agree to follow many recommendations.

However, in 1976 after the 42nd amendment to our Constitution which included education in the concurrent list, it was stated that the central government could take up the quality improvement programmes and finance such projects directly. Under these guidelines direct central assistance schemes were floated for new laboratories, libraries, resources centres, short term teacher training programmes, curriculum development centres etc. In 1977-78 several community polytechnics were initiated for establishment of community development cells within the polytechnic campuses and with extension arms in rural areas for contributing relevant technologies and reorient their own training programmes based on the feedback from rural areas. Subsequently, Centres for Development of Rural Technologies (CDRT) were established in a few institutions and organized training programmes were initiated in the field of renewable energy and appropriate technologies.

In 1974, a committee named as Kelkar Committee was appointed to review the performance of Technical Teacher Training Institutes (TTTIs) and to make suggestions for their future plans and development. After that, in 1990, the Ministry of Human Resource Development (MHRD) appointed another review committee for evaluation of the activities of TTTIs. The major observations of these review committees towards role of TTTIs in the field

of technical education are as follows :

"The institutes have achieved commendable success in the fields of technician teachers' education; curriculum development; resource development; educational research & extension activities related to educational planning, curricular reforms and technology transfer through a set of polytechnics in new dimensions & disciplines. Many of the developments and innovations propagated by them have not been fully utilized by the system due to various limitations and constraints".

The present technical education system of the country is not able to keep pace with the industrial development and technological advancements. The requirements of technical education in 21st century will be different both in intentions and executions in comparison to that of today. Keeping these points in view, National Policy on Education (1986) recommended some measures to uplift the standard of technical education which are discussed below:

1. The reorganization of technical education should take into account the anticipated scenario of the century with specific reference to the likely changes in the economy, social environment and production.
2. Minimal exposure to computers and training will form a part of technical/professional education.
3. A large segment of people will be offered access to technical education programme through distance learning process.
4. Appropriate formal and non-formal programmes of technical education will be devised for the benefit of women, the economically and socially weaker sections and the physically handicapped.
5. Networking between technical education, industry, R & D organizations, programmes of community development and other sectors of education will have to be established.
6. AICTE will initiate formulation of guidelines for identifying and awarding academic, administrative and financial autonomy to technical institutions.
7. Continuing education departments will be established in selected polytechnics and engineering colleges. These programmes will lead to diploma, advanced diploma and degree in engineering etc.

8. Projects for application of S & T for rural development will be undertaken by selected community polytechnics in order to understand the problems and process of rural development through action research and evolve replicable models.
9. Learning Resource Material Development Centres will be established in IITs, TTTIs and other identified institutions. The centres shall undertake the development of print as well as non print resources to meet the needs of different ability groups and to organize dissemination and distribution of learning resources.

Further in the revised POA-1992, it is recommended that technical education has to play an important role in developing highly skilled middle level manpower for both organized and unorganized sectors. Necessary steps will be taken to make technician education flexible, modular and credit based with provisions for multi point entry to achieve this goal. In the critical review of NPE-1986, it has also given emphasis on some other aspects of technical education which are summarized here :

1. Efforts will be made to provide substantive funding for strengthening the programme of modernization and removal of obsolescence in order to upgrade the infrastructural facilities and thereby improve the quality of technical education all over.
2. Teachers in technical institutions will be recruited strictly on merit by open competition on all India basis as per the guidelines prescribed by the AICTE.
3. The scheme of community polytechnics will be further developed in terms of its scope, coverage and activities.
4. Opportunities for technical education for women at all levels will be suitably increased. Additional polytechnics for women will be established and concerted efforts will be made to increase the enrolment proportion of girls in polytechnics and engineering courses.
5. Multiple usage of infrastructural facilities in technical institutions will be attempted by conducting part time evening courses, continuing education programmes, consultancy and testing services etc. Private and voluntary efforts in technical education will be encouraged.
6. Technical institutions will have to achieve maximum self-reliance by generating resources through measures like enhancement of fees

coupled with provision of soft loans to the needy students; consultancy; sponsored projects; from different funding agencies; community contributions; raising donations for infrastructural development; establishment of industrial foundations; charging fees for specific facilities such as laboratory, library, games, magazines etc.

Problems in Technical Education

During the last 150 years, technical education in India, has undergone considerable change. Earlier it started as a training programme for upper and lower subordinate services in the government departments and railways. Gradually as the manpower needs and social requirements changed, the technical education content underwent a gradual change for serving the needs of this country and society. Technical education started covering wide spectrum right from the training for self employment to training in hightech areas like computers, electronics, communications, modern textiles, pharmaceuticals, etc.

Since long the major thrust has been to train manpower for the organised industry and somehow, due to administrative problems and initial inertia to change, the technical education programmes have by and large remained theoretical, lacking proper skill training and sometimes only a diluted form of degree in engineering programmes. We boast of the third largest pool of scientists and technologists in the world but our technological achievements are far from being satisfactory. At this juncture a question arises as to why the quality of technical education programmes is not up to the mark.

As an answer following problems may be pointed out :

1. The administrative setup for managing technical institutions is highly centralized and does not give flexibility to institutions to respond to the needs of the society or organise courses in relevant technologies.
2. The technical institutions are by and large organising traditional, conventional and short term training programmes, mainly based on obsolete technologies and this does not meet the fast changing requirements of the industry/organised sector.
3. Due to lack of autonomy to institutions, the curriculum development, evaluation system and testing procedure etc are rigid and the

principals and teaching community of these institutions are bound to follow these guidelines.

4. The passouts from these institutions lack skill orientation and most of their teachers do not have exposure to industry. On the basis of recommendations of the Damodaran Committee training-cum-production-centers were initiated by some polytechnics and engineering colleges and some of them worked well for more than a decade. Unfortunately interference by sales tax department, labour department, income tax department, etc. vitiated the atmosphere and the teaching community is in no position to benefit by these centers.
6. Technical institutions are run hardly for a few hours everyday and in a large number of these institutions the facilities are obsolete and that too are not fully utilized.
7. The technical institutions do not have any organised setup to identify the needs of society. With the present changing scenario of development and liberalisation they are ill-equipped to fulfil the needs of the community service sector and the industries.
8. All polytechnics are still running only diploma courses / programmes. Due to this, the technician training has not developed qualitatively and do not produce skill oriented technicians as per demands of new technologies.
9. The major beneficiary of technical education i.e. society, organised sector and government are unable to display their effective participation in the growth of technical education. The technical institutions are thus still providing stereo-type training courses and have little rapport with the society and the organised sector and majority of them heavily lean on government support only. Private initiatives are negligible and they are not encouraged.

Some Possible Remedies

In the light of the foregoing it is felt that the following steps should help usher in the needed and desired changes in the technical education system of our country. These are —

1. In order to cope with the new trends in international relations and world economy, we need to plan effectively for mobilization of resources, optimal utilisation of resources, networking and sharing of facilities, excellence in

R & D effort, improved productivity, increased efficiency, high quality, development of competent and relevant manpower and international interaction and collaboration in case of technical education.

2. Application of new technologies in transportation, power generation and distribution, communication and water resource development for increased efficiency and productivity. Due emphasis should be given to these aspects of existing curriculum of technical institutes.
3. The administrative set-up for managing technical institutions should be decentralised and made flexible for the individual institutions to respond to the needs of society and region and to organise courses in relevant technologies.
4. Technical institutions should be encouraged to move away from traditional, conventional, obsolete or even fashionable technologies and move on to evolving technologies relevant to changing needs of the nation.
5. The students of technical institutions should acquire good skill orientation and for that teachers of these institutions should have good and periodic exposure to industry.
6. Training-cum-production centres can also play a critical role in inculcating skills in the students. These will expose students to real market, create a feeling of confidence in them and test their skills simultaneously.
7. The cost of technical education can be significantly reduced and large number of trainees can be trained by utilizing institutional premises and facilities round the clock in shifts.
8. A good part of technical education should be aimed at inspiring trainees for self employment and entrepreneurship.
9. Curriculum, teaching methodologies, instructional materials, and equipments needed for teaching, learning & training be updated and renewed continuously.

Conclusion

India has very good potential to emerge as a modern scientific technological power if only we could organise and galvanize our human resources and talents. Technical education should be viewed as an innovative enterprise in the 21st century encompassing value-oriented education as an integral part of general education, aimed at achieving sustainable development with right linkages of science & technology with other parameters.

Organizing a Management School

R. Prabhakara Raya*

The management school started by any university or a non governmental organisation needs to be well planned for its successful launching. The school will, then, be able to nourish and strengthen itself to cater to the expectations of its "down to earth professional" clientele — regular students, participants in the management development programmes of the School, sponsors of the project studies, accreditation agencies, watch dog bodies like AICTE and professional management associations.

The National Policy on Education - 1986 sets the new agenda of action for the country's management education. It includes many areas of governance and organisation of management programmes. They include thrust areas, generation of funds, flexible entry for admission, accreditation and such others.

It stipulates that the management education system and its programs should cater to not only the corporate sector but also "study and document the Indian experience and create a body of knowledge and specific educational programs suited to the under managed, non corporate sectors like education, rural development, services, small industry, etc". Another organizational dimension suggested by the NPE is that all the programmes be "restructured on a flexible modular pattern based on credit system and with provision for multiple entry". The AICTE (All India Council for Technical Education) is expected to provide "suitable models and necessary guidelines for this purpose".

Management institutions and departments in the universities, therefore, contribute to the National Action with the help from 'NPE on management education' as a guide to chalk out its strategy and action plans to include its thrust areas — corporate sector and/or non corporate sector. Generally, the appropriate government takes the lead to support the management programmes meant for non corporate under managed sectors.

The management educational system has much

to offer on a commercially viable basis in the changing market scenario. The following paragraphs show how this can be realized by a management school [SM].

Timing

The school should be started only after the requirements in the areas of infrastructure, teacher recruitment and academic schedule are met. There should be enough of lead time to plan and organize the establishment of the school on a firm foundation. The initial phase is crucial in setting its tone and value system in a diverse and dynamic organizational context.

We find around tendencies to start first and bother for the essentials next. It is antithetical to management and injurious to the purpose of a School.

Context

The context of the proposed school should be properly assessed. This helps to take a strategic view on its "positioning". The SWOT Analysis may be attempted. The following is an example to drive home the point.

Possible Strengths

Strong leadership at the school level with a tenacity to build the school on firm foundations with in-built flexibility for availing/providing growth impulses from within and outside of the school, i.e. the business environment.

Competent faculty who present a work culture of result based accountability. This may mean a proper mix of the class work, measurable research endeavours, minimum number of management/executive development programmes to be organized in a year, minimum number of case studies to be prepared, sponsored consulting projects and identification of the avenues to contribute to the campus recruitment of the students.

Weaknesses

There may not be any inherent weaknesses for a new school, even on the basis of location, when properly planned. However, the very fact that it is new may look like a weakness initially.

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Opportunities

The demand for competent managerial talent is on an increase from domestic and foreign companies operating in and from India.

The need for the executives to update knowledge and sharpen talents is an acute reality. This opens up the scope to run short term (week long, mostly) programmes by the management schools.

The increasing realization of the industry that the academics in management can be utilized for their market-related research to design and develop profitable strategies. This opens up for continuous and economically viable relationship between one of the users of the products and the academics of the school.

Similarly, the presently under managed governmental sectors such as education and rural development can be tapped to render the school's usefulness to them on economically viable terms.

Threats

The school may have competition from other industry sponsored training/research institutions and other govt. funded institutions. To illustrate, the Management School in the University of Hyderabad may feel competition from CESS (Centre for Economic & Social Studies) and well established ones like ASCI (Administrative Staff College of India).

It is, therefore, necessary to "position" it appropriately so that its USPs (Unique Selling Points) can ensure a competitive edge. At the same time, it can avail of the talent available in other institutions — through networking — in a supplementary way.

It is the quality and vision of the leaders of an institution which decides its value adding capabilities. What should be the personality profiles of management teachers at different levels?

Personality Profiles

The Dean/Director

The senior most academician should be a person of proactive nature with institution building capabilities. The abilities of such a person include:

- Proven academic excellence in any area of comprehensive canvas
- Drive with determination to contribute to the building up of an institution as a leader.
- Ability to be a result yielding coordinator.
- Calibre & competence to be at the interface to

evoke interest and confidence among the constituents of the interface such as industrialists, government functionaries, professional managers — Indian/foreign, business associations,.....

The Senior Faculty Members, Professors

Should possess the zeal to take up research studies/projects/assignments/consultancies in both areas of long term and short term importance and relevance.

The first team of teachers and their leader/coordinator set the tone. Their selection may, therefore, demand a lot more time than for ongoing activities in the departments.

Curriculum Finalization

The school may involve right from its inception the "users" of the school in the planning of its activity frame including curricula development.

Towards this end, one/two Round Table(s) may be organized with a few leading industrial houses in the area and from outside — both Indian and foreign — and a couple of senior personnel from related govt. agencies/bodies like ministries of HRD, Finance, Commerce and Planning Commission. A structured discussion on what they expected from the Business School would help to take note of the "needs" of the operational area.

The output from the Round Tables will be used by the faculty in finalizing the syllabus and course structure, semester-wise.

The MBA programme covers three areas of management:

- * the foundations of management;
- * the functional application areas of accounting, finance, marketing, human resources management, and information systems; and
- * the integrative areas of general management and strategy including an approved project.

This puts the prospective school on a strong footing with respect to the needed industry exposure that the students should have during the course — for summer placement and field based assignments. This process itself will send information about the school to the prospective clientele.

Also this consultation would enable the school to gauge whether any financial assistance would be forthcoming from the users in the form of sponsoring the candidates for the MBA and other programmes on some mutually agreed terms or assistance to the students from the financial institu-

tions in the form of loans.

Work Culture

The nature of the course and its environment make it necessary to have demanding work culture. Informality, academic autonomy, flexibility for adopting to the requirements of the school's wellbeing and commitment to the sense of accountability make the work culture.

Generally, the feasibility reports relating to the establishment of Indian Institutes of Management — one at Cochin and the other at Indore are in the offing — suggest the difficulty of a management department of any university to "stay separately" — from that of the other sister departments — in terms of work culture and work practices.

This, however, may not be the case in the universities where the faculty and students are highly demanding, academically and professionally. In any university, in fact, the management school can draw the expertise from other sister disciplines and courses; Management is interdisciplinary in nature.

Organizational Structure for the School

The organizational structure of management school comprising a Management Board, Board of Studies, the relational facilitative roles of Faculty to ensure synergy needed for a professional school, ..

Guiding Board of Management School [GBMS]

The university may consider having a GBMS. Its function is to promote the wellbeing of the school, in particular, and of management, in general. This would not have any "powers". It plays the elderly statesman role for the nourishment and the strength of the management school. It may comprise :

The Vice Chancellor — Chairman

The Dean/Director — Secretary

Members:

- A few industrialists — from within the place of operation and outside,
- A few professional senior level managers
- The Chief Secretary [or his/her nominee] of the Government of that State,
- A nominee each [rank of Joint Secretary (JS) & above] from the ministries of HRD, Commerce, Finance, and Planning Commission,
- A nominee each of FICCI, CII, ASSOCHAM, State Chamber, ..
- All the retired VCs of the concerned university
- All the former Deans/Directors of the management school,

- 3 members of management faculty by rotation,
- 5 special invitees to be decided by the Dean/Director in consultation with the Vice Chancellor.

The term of each Board Member may be three years. This can be reconstituted with or without additions/deletions by the Board itself. There will be no stipulation on the maximum number of members on the Board. The Board meets not less than once a year.

Admission Process

The admission process starts with the release of the advertisement. The timing of both the ad and written test would ensure larger participation of MBA aspirants. If, in the first year itself, the number of applications received is fairly high, it would be a good start for the school and its image. During the national level selection process i.e. during Group Discussion/Interview sessions, one/two senior level industry persons may be associated.

Intake

To start with, the school may have a student strength of 30 through entrance mode and five from foreign/Government of India nomination quota(s). 30 may be increased to 40 from the third batch onwards after ensuring placement for the earlier two batches.

Work Schedule and Activity Frame

A compatible work schedule to ensure time for extensive interface to the faculty and the students can be designed on the following lines.

Class Schedule

This may be from 8 A.M to 1 P.M. It enables the students to extensively use the library facilities. They need to read a lot to keep abreast of the documented contemporary business situation apart from other reference books. This also facilitates the faculty to devote some time, at a stretch, on each of their other roles including counseling sessions to students who generally stay on the campus.

Other Activities

The management school may collaborate with sports or other appropriate agency to initiate its students and the Executive Development Programmes/Management Development Programmes (EDP/MDP) participants into "Yogasanas". This helps them to cope up with the stress. In a similar way, the advice of the "gerontologists" will have to be provided as the care for old age should start very early in life for "Managers to be" whose dietary habits are the first casualty in the profession.

Home Science in Higher Education

Some Misconceptions

Padma S. Chari*

Recently I was asked to talk to a group of teachers in the Department of Continuing Education of the Maharaja Sayajirao University of Baroda on "Introducing Home Science in Continuing Education." This opportunity to talk on Home Science brought to a boiling point what was simmering in my mind for a long time regarding the concept of Home Science that home scientists have been holding and perhaps will continue to hold without any serious thinking done about it. Though the talk provided some vent to my bottled up feelings, it was not sufficient to pacify my conscience and relieve my mind of the pressure of my feelings and thoughts. I have, therefore, put down in this paper what I have perceived are some misconceptions about Home Science that are prevalent among home scientists and the public and their sad consequences.

The discussion that follows is based only on my professional experience of about twenty eight years of teaching and administration in a college of home science, and on the experiences of such academic exercises as curriculum planning, selection and evaluation of teachers and guiding of research. I have had also the advantage of knowing the opinions of the public and the alumni in regard to the merits and shortcomings of home science education. Participation in home science conferences, seminars and workshops has brought me into contact with opinions of many home scientists. All these experiences have cumulatively given me impressions of what home science is thought to be by home scientists and the public. From these impressions I have become aware of some misconceptions that are held by many as to what home science is. These misconceptions, I feel, have distorted the true image of home science and confused home scientists as to the directions that the future development of home science should take.

A brief resume of how home science came into the sphere of higher education in India may help in

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understanding what the home scientists and the public thought about home science education when it was introduced about four decades back as a subject for a baccalurate degree. It will help to understand how the concept of home science that is reflected in the educational programme in different parts of the country came to be formed, and why there is a controversy about the future directions of the subject at home science conferences and seminars in recent times.

Home Science education in India as referring to education which focused on management of household life falls into two categories. One is home science offered to girls in schools and the other introduced into higher education. Home Science, termed sometimes as 'Domestic science', 'Housecraft' or 'Home Management' was introduced in middle and high schools for girls in a Madras Mission School even as early as 1715, and later was increasingly offered in many girls' schools. This trend seems to have been a reaction to the educational pattern for girls that was in vogue at that time by which education for girls on par with boys was advocated and accepted.¹

Uplift of women was seen to be possible only through educational equality with men and consequently entry of women into higher education was strongly advocated and well established in India by nineteenth century. However, only women of the upper classes in urban India benefited. Moreover, the education of women of elite class made no impact on the quality of life of women in the rest of the society. Social life in India began to rapidly decline in the period of early 19th century. It was felt by many social reformers of that period, that the social subservience and ignorance of women were partly the cause of ill-health, poverty, superstitions, gender discriminatory social practices, deficiencies of growth and development of children and lack of a spirit of adventure in the youth of the country. The education of women was seen to be important to their role as managers of a harmonious home life, in building the health of the family, in taking care of sanitation in and around the house, and in providing nutritious food. Hence, special education, such

as 'domestic' science in all these aspects of life and in skills useful in their roles as future home makers was seen to be important.²

If there was a case for framing a different curriculum for girls in schools as early as 1917 onwards, to make education suitable to the life of a girl growing up in the Indian home and getting married in their teens, there was an equally good case in the thirties too for education to be geared to women's life, in the opinion of women's organisations working for the welfare of women. The national freedom movement of the thirties and forties sought equality of women in all aspects of socio-political life and held that an expanded role for women in the home and the family was pivotal to the welfare of the nation.

The importance of enhancing the quality of home life through appropriate education was realised in the USA, Canada, Britain and Australia early in the nineteenth century. Women in academics in these countries felt the need to make a professional approach to the task of home making and family management.

In tracing the genesis of Home Economics (the name for home science in USA) in the United States, Dr. Budewig, at the Detroit conference of the American Home Economics Association in June 1964 drew attention to the fact that eminent men like Bacon, Rumford, Youmas and Dewey, as also Catherine Beecher, held the study of daily life activities in the home, of the materials involved in sustaining daily life, and the care of human development from childhood as most worthy of study, if the quality of human condition was to improve. Out of the pronouncements of such men and women, a movement of studies related to the daily home life of human beings gained momentum, and under the leadership of Mrs. Richards in 1899, at the Lake Placid Conference (USA) the field of 'Home Economics' became an officially established field of study.

Home Economics was described as a unique field of study by Dr. Budewig for the reasons quoted below³:

"Finally, what is the idea that makes home economics unique as a field of study that focuses on families? I would like to submit that it is the philosophy that has been expressed throughout our history from

Francis Bacon to Rumford to Youmas to Richards and the early Lake Placid pioneers. Its dynamic is the relationship that exists between the physical-material world of 'things' and the socio-psychic-spirit nature of man.

It recognises the relationships, values, activities and 'things' are so inter-related that we cannot work with any one of them in isolation.

It is this particular way of focussing on family life therefore, that is peculiar to home economics. The social worker relates to families in one way, the family relationships specialists and marriage counsellors in another, the religious leader in still another, but the home economist relates to the family in its home environment. It is the home economist who is (or should be) most knowledgeable about and understanding of the total of the home environment and how it affects the persons in it. This way of relating to individuals and families makes the home economist's task, perhaps the most comprehensive and complex of any, for it must span every facet of life from its physical-material aspects to its social, psychological and aesthetic."

The thinking of eminent women educationists and leaders at the head of women's organisations in India was in line with the philosophy and the objectives of home economics in the United States outlined above. The need for raising the quality of daily life of the Indian citizens by focussing education on building better homes was realised by many educationists and social reformers among men in India too. It was against this background that, drawing inspiration from the home economics movement in the USA, Canada and Australia, home science was introduced in higher education at the undergraduate level from 1913 and later around 1935, in a few women's colleges.⁴ But there was a difference in the scope and the academic status of home science in India, as compared to the above mentioned centres.

The history of the genesis of home science was closely linked with the education and upliftment of women, since managing home life was continued to be seen as solely a woman's responsibility and was narrowly interpreted as concerning the tangi-

ble aspects of home-making. Home science was not perceived as useful for men as well as women. Hence in the academic world a certain narrow concept of home science gained hold but what exactly was that concept of home science cannot be defined with certainty as no hard data on the subject is available. Very few universities and departments of home science and home science associations have published literature on any debate held on the concept, philosophy, or method of home science education or of consensus worked out on any of these aspects. There has been no explicit statement of a national consensus as to the nature and scope of home science by any national level home science organisation.

However, what consensus there is, seems to be a general agreement across the country as to the broad structure of the subject, as being composed of four to five 'areas' of home science. No consensus has been evolved among home science academicians as to what the bedrock of principles should be in each area of home science in the different parts of the country, so that home science curriculum does not float on the current of contemporary problems and popular whimsical demands, but is anchored to a core body of objectives unique to home science. On the other hand several factors affected the nature of home science education. These are discussed below.

Factors Affecting Home Science Education

As it turned out, the field of home science became gradually sharply divided into four or five major areas, each treated independently of the other, with its own Board of Studies and its own Department. Specialisation in each area of home science was introduced in the belief that it would raise the status of home science as an academic subject. Also, the desire to create academic preserves has led to more and more specialisation and shifts in the goals of specialisation away from the major goal of home science education, that is, education for building a happy and healthy home life and for improving the quality of human life.

Another factor was the movements for women's development for raising the economic independence of women. Also, the rising aspirations for better living conditions that required increased income for families, spurred women to look for work outside the home. There was always the challenge of being on par with men in many vocations. These

trends in society influenced heavily the curriculum of each area of home science. While between the sixties and seventies, there was emphasis on research on academic issues in home science, in the later decades issues of socio-political importance, such as family planning, vocationalisation, income generation, gender equality. 'save the girl child' and whatever else was on the bandwagon of the national government development plans came to be included in the curriculum of home science.

With only one national level professional association of home scientists, namely, the Home Science Association of India, meeting for two days once in two years, the question of relevance, validity and development of home science education could be examined only superficially. When professional home scientists have not been an interactive professional community exercised over academic issues even within one faculty or one university, a national level interaction could not be expected. An effort should be made to inculcate professionalism among home scientists by forming state legal branches of the Home Science Association of India and holding state conferences annually. There should be a significant increase in inter-organisational and intra-organisational communication through meetings, group discussions, newsletters and periodicals among home scientists in professions.

A major cause for diversion of home science education away from its original aims is the paucity of relevant substance of worth based on study of Indian home living conditions and problems due to changes and challenges that beset a family in the present age. A great deal of research is needed on our home conditions in all aspects of home life and of the home in relation to social and natural environments in different parts of India, to build up subject matter and objectives of home science education that will be relevant to Indian students. A superficial treatment of the subject, irrelevant to the realities of India's home and family life, and dependence on subject matter presented in the textbooks of other countries have made home science education lose status in the eyes of the academic world and the public. This is one reason for home scientists losing motivation and direction in home science education, and for clutching at the straws of popular socio-political campaigns such as career education in the undergraduate curriculum of home science education.

The economic pressure and development demands made on the Indian people in the past and current decades have led to priority of attention being given to preparing the youth of the country for jobs at many levels. For this purpose, vocational education should be at the top of the country's agenda in education, and home science education too should be responsive to this national need. But this should not mean the distortion of the whole field of home science education to serve a temporary need at the expense of the long distance major goals of home science. The very *raison d'être* of introducing home science cannot be ignored and a temporary movement allowed to hijack a field of education from its well established long term goals.

As a result of the clamour for specialisation in preparations for careers, the concept of home science as education integrating principles and skills in managing life situations in the home, became marginalised. Specialisation in each area of home science was carried to such extreme ends that study became narrowly oriented and utilitarian. The effort to specialise at the undergraduate level could lead to qualification for only a few selected middle level careers such as dieticians, nursery school teachers, hotel hospitality planners, banquet managers, discotheque managers, sales women of fashion costumes, publicity personnel of market products of commercial firms and so on. In spite of this background, even for these careers at least a year at a technical school, business training institute, in-service training in companies or factories and hotels may be required.

In the decades of seventies and eighties, departments of home science multiplied, offering both a general home science curriculum as an optional for the B.A. degree, and various patterns of specialisations for the B.Sc. degree in home science. A great number of small colleges and departments offering home science needed a generalist in home science as they could not afford to employ more than two lecturers for home science. Hence narrow specialisation even at the Master's level meant that only a few could get appointment as lecturers in a majority of home science departments offering home science at the undergraduate level. Generalists in home science, if they completed the B.Ed. degree additionally, could be employed in the higher secondary schools too for teaching home science, while this option was cut out for specialists.

Another factor that affected the fortunes of

home science education was the awakening on the part of the Government of India to the importance of nutrition, child and maternity care as a factor of public health, population control, productivity in agriculture, and rural development in general. National laboratories were set up for improving food production and the nutritional status and health of the rural population. Agro-industries were encouraged. A nation-wide infrastructure was laid for extension work in agriculture, small scale industries, income generating projects, self-employment schemes, 'anganwadi' nursery schools in villages, school lunch programmes, and family planning programmes. The personnel for manning these several development programmes were either trained in the national laboratories already set up, or in special training wings attached to the ministries of Human Resources and Rural Development, Social Welfare and Education. The national research and training institutions drew their students mostly from the graduates of the traditional arts and science colleges.

No preference or call was made specially for the home science graduates who applied for the training programmes or for appointments to posts in the development programmes even if they involved a knowledge of home science, and the home science graduates were well equipped to function in these programmes. Home science faculties have not highlighted the potential of home science education as a foundation for many kinds of careers. What, however, is apparent is the fact that most job advertisements do not mention home science as a subject for eligibility in applying for the job advertised.

Where entry into professional level training programmes was concerned, here again, graduates from traditional arts and science or commerce courses were held to be more qualified as these graduates had specialised in the related foundational subjects much more than home science graduates. Specialisation in any one area of home science could not possibly be to the extent done in arts, science or commerce subjects at the Master's level. To justify a degree in home science, at least one or two years of study in all areas of home science would be needed which would cut down the years of specialisation in one area of home science at the Master's level. Also, even specialisation in one area of home science would involve a broad based programme of study, integrating principles of science and art related to that area of home science,

and not intensive study of one narrow branch of science, art, commerce or economics. Hence, entry into professional and technical courses proved difficult for home science graduates.

The lack of career opportunities for home science graduates has come to be seen by home science graduates as a weakness of the home science curriculum, not being in tune with the aspirations of the youth of the twentieth century for a career oriented education. It is not clear how widespread this perception of home science is across the country as no serious survey has been done on this aspect. The tremendous pressure for admission and shortage of seats in colleges deny students an opportunity to enter courses of their choice and many, especially girls, are forced to take any course for which they have admission. Many home science students may not have entered the home science colleges out of an appreciation of home science, but to get a degree as a minimum requirement of any good job. Such students may be those who want a career oriented course.

Given the variation in the socio-economic conditions from one state to another, and the differences between the urban and rural areas, it is doubtful if there will be a commonly shared perception as to the changes required in the home science curriculum or as to the need to make home science a career oriented education. Twenty one biennial conferences of the Home Science Association of India, have been held from 1951 to 1966, at which home scientists in authority and in prominent social positions have been vocal on how home science curriculum should be adopted to the national issues that arose from time to time. So far, no national consensus has been noticeable as an outcome of the deliberations at these conferences⁵. There is little information as to the impact of the efforts of the biennial conferences on the home science curricula, on how well the goals of home science education are fulfilled, or what evaluation has been done by the various colleges, of the outcome of home science education, by canvassing the opinions expressed by the alumni.

The trend to gear home science curricula to national issues such as career education, income generating projects, energy conservation and so on, has led to 'ad hoc' additions to the undergraduate courses and further specialisation, resulting in lack of integration of the different areas of home science into a distinctive and unique field of knowledge, focused on issues of home and family life. This state

of affairs has arisen, in my opinion, due to certain misconcepts about home science education among home scientists which are listed below.

Misconceptions about Home Science

It is a misconception to hold home science as necessary only for women. This is perhaps due to home science in India having been introduced in women's colleges first, unlike in USA and Canada, where the courses of home economics were open to men too since it was concerned with the daily life of a family and life in the home. The aim is to improve the quality of home and family life, for which the involvement of both men and women is necessary. Many failures, unhappiness, aggressive social behaviour and mental problems can be traced to the poor quality of family and home life. So also can the formation of greater character, good scholarship, mastery in arts and skills of people be attributed to the kind of home life they had.

Many scholars have written on the significance of the home to the society, and even today, in an age stirred up by women's movements bidding for freedom from the chores of domestic life, great concern is expressed over marginalising the home in favour of achievements in a career or in public life on the part of men and women. A most recent example of such a concern was seen in a telecast of a panel discussion on total quality management, in which a panelist stressed on the importance of the home in bringing quality into life, saying ".....quality should be cultivated right from nursery".⁶ Management of individual and group life in the home to bring quality in family life requires education of both men and women in home science. Home Science will be effective only when it is not considered as education for women alone, but as basic education for all.

Another misconception is that no special education is needed for running a home. Housework is seen to be the only type of work to be done in a home, involving only simple manual work. On the other hand the home should be seen as the most complex social institution and an important social unit that makes up a society, a nation, and a civilisation. The home is where a critical phase of human development takes place, and where the quality of social life originates, the home and the family in India form a fort from which the cultural values of the people are defended against aggressive onslaughts of alien and artificial values. At the same time, the home offers the privacy and the freedom to be individualistic, to develop one's potential for making a planned change that does not disrupt

an orderly society. The individuality of families and homes allow orderly changes in cultural values and social practices to happen. If home and families are stable and strong economic units, the society can be resilient under social and physical disasters, in the way India's social life has been over the past centuries.

Many eminent scholars from the world over have eulogised the home — the habitat of the human family. To preserve the strength of the home in these days of rapid environmental changes, flood of new ideas and rapid communication, all of which upset the equilibrium of home life calls for a broad-based scholarship, and understanding of the importance of the home and family, and development of many kinds of human abilities. Only those who have failed to grasp the depth and breadth of home science will feel the need of making home science a vocational education in the sense of training for particular job.

It is again a misconception that a study focused on what is termed as 'normal daily life' of a family in the home is too 'ordinary' or 'simple' to deserve academic status. Daily life is seen in terms of routine, and, therefore, filled with mechanical and repetitive activities. On the contrary, even in Upanishads it is pointed out that each day should be treated as a new gift of life to do our duties better and as an opportunity to improve our conduct. The chance to delve deeper and to discover our new potentials is presented daily. The quality of life achieved each day adds up to the total quality of life in a person's life span. Each day's lapses should be guarded against, as even a small lapse repeated daily can, like a rock in the middle of a stream that diverts its course, make a person stray from a desirable way of life.

The dynamics of family life, or even that of a single person with a home, brings new problems, issues, contingencies, and interpersonal insights into human potential, requiring a wide range of human abilities and knowledge so that the daily home life can never be a matter of simple routine. Individuals should be enabled to expand their social, psychological and intellectual 'life spaces' by means of education such as home science education by increasing the ability to interact satisfactorily with the neighbour, and community services like markets, civic government services, schools, and the public transport system, increasing their options as consumers for improving the quality of social life. Home Science is for enriching the daily

life, thereby leading to a well fulfilled life of a person.

There is also the wrong notion that home science is only for women who do not wish to have a career or work outside the home. Though a Bachelor's degree in home science does not train students for particular jobs directly, the students acquire foundational knowledge and skills required in a wide range of jobs. To get qualified for any specific job, no matter in which subject the undergraduate degree is earned, further specific training will be necessary. The first university degree in home science, on the other hand, equips the graduate for entering a wide range of middle level occupations, requiring only a brief orientation to the selected job. For example, a B.Sc. graduate with a major in clothing and textiles gathers sufficient knowledge and skills, in preparing designs for printing or dress designs for readymade clothes, needed for working at the laboratory or workshop level in textiles industries. This graduate would know enough scientific principles to be applied in the design for children's dresses to help in designing and selecting children's dresses or in giving consumer educating to help with the sale of desirable children's dresses. Likewise, the Foods and Nutrition B.Sc. major can plan meals in hotels, special diets in hospitals, or work in test kitchens of food preservation industries. Such examples abound in all the areas of home science. Such a wide range of middle level careers are not easy for graduates who narrowly study the traditional arts and sciences because their options would be greatly reduced due to a need for more intensive study at a higher level for jobs in the fields of technology and commerce. Hence, though the undergraduate education in home science is not education for a career, it lays foundation for a wide range of careers.

The pressure on home science educationists to give career orientation to the undergraduate home science curriculum may also be due to offering home science as the only subject for a degree in home science. This pressure on home science may be relieved if home science is offered as a major or as a minor along with any traditional science or arts subjects as an optional for the Bachelor's degree. Provision to specialise in home science or in any other selected optional at the Master's level can be made, throwing open avenues for careers.

To save home science from being pressured out of its role in higher education and the home science curricula from being distorted to meet the demand

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Economizing on the Answer Books

B. K. Sen*

Introduction

Having been an examiner of about a dozen universities and educational institutions for well over two decades within India and presently outside, I had occasion to examine thousands and thousands of answer books of a number of courses ranging from certificate to postgraduate.

While examining, many interesting features of answer books attracted my attention. The sizes of the answer books in terms of the length, breadth, number of pages, number of lines per page, etc varied from university to university, institution to institution giving an impression that possibly Bureau of Indian Standards had not yet standardized the dimension and other features of an ideal answer book. The number of pages usually range between 16 to 24 without taking into account the extra sheets added by the students. With extra sheets in one extreme case the number of pages of an answer book totaled 64! I really wondered how the student could manage to write so many pages in just three hours as I could never write more than 32. Depending on the examination certain universities provide ruled answer books as well.

Wastage

One thing that has pained me all through is the enormous wastage of paper. Almost all answer books I noticed contained blank pages sometimes upto ten or even more. If on an average even two pages remain blank, the number of pages going waste in a secondary, higher secondary, or even in university examinations can go into millions and millions in a single year! The cost of this wastage can easily be computed.¹

The Answer Book

The University of Malaya has found out an effective way of reducing this wastage to the minimum. Here, just a few minutes before the start of the examination, each student is normally given 5 to 6 loose sheets of A4 size along with a folder. Depend-

ing on the subject, ruled sheets are provided. Extra sheets are provided on demand.

The folder forms the cover of the answer books and contains (i) the roll number of the student (both in figures and words), (ii) the seat number, (iii) examination centre, (iv) the code number and the name of the paper, (v) the date of the examination, (vi) a table for assigning marks according to question numbers, (vii) instructions for the student, and so on. The bottom portion of the top cover is perforated and easily detachable and contains the student's roll number (in figures), code number of the paper, name of the paper, seat number, and signature of the student. The perforated portion is detached, arranged according to the roll numbers and kept for official use. The folder is perforated at the top left corner.

Each sheet given to the student is also perforated at the top left corner to facilitate tying the sheets with the folder. The top of each sheet contains an intricate pattern not easy to copy, the university emblem, the name of the university, roll number of the student, sheet number, question number, and some such instructions as "Don't write on the margin". The ruled sheets normally contain 30-odd lines.

Besides the sheets and the folder a piece of thread is also given. At the end of the allotted time of writing the examination, the student arranges the sheets according to sheet numbers, puts them within the folder and finally tie them with the thread.

After the examination the unused sheets left on the tables are collected and used in the examination that follows thus allowing not a single sheet to be wasted. Moreover, it provides several other benefits.

Benefits

Question Numbers

In about one to two per cent cases I have noted that the students write the question number wrongly and in some cases forget to write the question number completely. In quite a few instances I observed that the student started writing the answer of a question not with the question number but with his answer number. The first question attempted

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was numbered as 1, even though the question number was different, the second question attempted was numbered as 2, and so on. The mistake of the student became evident while examining the answer book. In a class test when a postgraduate student committed this mistake, I asked him to know the reason. His answer that throughout his life he had been numbering his answers like this made me aghast. For the first time in my life I realised that the students are generally never taught the very basics of writing the answer in the answer book. It is left to their common sense. Here as each sheet contains the heading "Question No." the student has no other option but to write it. Even if the student forgets to write the question number in one or two sheets, it does not matter much. The question number can be easily ascertained from the previous or the next sheet.

Scattered Answers

There are instances where students write the answer of a question in several non-consecutive pages simply because while writing the answer to a particular question he misses some points which he remembers afterwards while writing another answer. Hence, he inserts those missing points several pages away from the actual answer. In one extreme case I found the answer to be scattered in five different non-consecutive pages of the answer book. It definitely gives rise to problem while marking or grading the answer. In case, the answer sheets are loose, as it is here in Malaysia, this problem does not arise at all because whenever the student remembers any point he has missed in an answer already written, he can write the point on an extra sheet and place the same at the appropriate place while collating the sheets at the end of the examination for tying them together.

Ruled Answer Books

Ruled answer books have got several advantages over non-ruled ones. It makes each line written by the student straight preventing elevation or declination and definitely provides a better look to the page and makes reading comfortable. In unruled answer books the number of lines in a page written by students vary from less than 10 to more than 30 in A4 size sheets. In such unruled sheets the number of lines written average around 20, whereas in ruled sheets it is always above 30. This also helps achieve a great deal of economy.

Conclusion

The economy that can be achieved in this way is but considerable because the number of students in

most of the Indian universities are very large. Considering the financial constraints each Indian university suffers, this type of answer book may be worth trying.

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Home Science in Higher Education

(Contd. from page 14)

for career training, it is advisable to offer home science in combination with other subjects for the Bachelor's degree. It will be even more desirable if home science is placed on par with mathematics and languages as a required subject of study for the first academic degree, and offered for specialisation only at the Master's level as an optional degree subject. Such a reconstruction of the graduate and postgraduate educational programme will free home science education from distortional pressures arising from the misconceptions of home science listed above, and allow home science to develop in line with the philosophy and the goals that brought home science into existence in India. This will then perhaps motivate research and teaching that can be expected to contribute to the depth and uniqueness of content in home science, deserving of a high academic status.

References

1. Shukla, A & Rajalakshmi. History & Development of Home Science in India. *Indian Journal of Home Science* 13 (1980) pp. 38-41.
2. Mathur, Y.B. *Women's Education in India (1813-1966)*. Bombay : Asia Publishing House, 1973 pp. 61-65.
3. Budewig, Caroline. *Home Economics in Historical perspective : Speech at the 55th Annual Meeting of the American Home Economics Association, Detroit (Mich. USA), June 23, 1961.*
4. Shukla, A and Rajalakshmi. *op. cit.*
5. Home Science Association of India. *Proceedings of the Biennial Conferences from the First Biennial Conference of 1953 to the 21st Biennial of 1994*. Baroda : HSAI Office, Indumati Mahal.
6. *Total Quality Management. Telecast of Panel Discussion chaired by Dr. Najma Heptullah, Doordarshan, Feb. 15, 1996.*

The Shadow Lines

A Quest for 'Indivisible Sanity'

Murari Prasad*

The novel is not required — even assuming the task is within the realm of possibility — to describe the specific historical forms of a society; that is not where the truth lies. Nor of course is it a matter of saying that the author's ideas are necessarily correct. But literature is always an attempt to reveal to us "an unknown side of human existence," as Kundera says somewhere, and thus although it has no privileged access to truth, it never stops searching for it.¹

— Tzvetan Todorov

Amitav Ghosh's *The Shadow Lines* is one of the most readable and least frivolous of the recent Indian novels in English. An effective fiction, it emanates from a particular historical moment which intersects the narrator and the nation at a crucial point of their evolution and growth. While capturing the high points of the historical moment in credible and efficient narrative action, the novel eventuates into a search for the vibrant concerns essential for the survival of central strength and sanity in society. The novel is rich in signifying transactions that do not depend for their effect on "solid slabs of continuous experience" but on the potentiality of materiality marshalled by the author to anchor his perception of reality. It quickens our conscience and triggers our response to the mingled frenzy of violence, idealism, passion and intrigue that has amputated the narrator's intimate history and geography. By skilfully manipulating the narrator's developing sociological consciousness and his interaction with multicultural representatives in a fictional construct, Ghosh makes his novel a supple medium of sophisticated comment on current realities. Although the situations are bound by their historical and geographical co-ordinates, they enlarge the spatial and temporal axes and offer a melange of insights into a kind of 'reality' that can sustain inter-personal bond across cultural boundaries and contain the threats flowing from the absurdities of borders and frontiers.

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The novel tells the story of the three generations of the narrator's family spread over Dhaka, Calcutta and London and lines up characters from different nationalities, religions and cultures in a close-knit, palpable fictive world. Written against the backdrop of the civil strife in post-partition East Bengal and riot-hit Calcutta, the events revolving around itinerant Mayadebi's family, their friendship and sojourn with their English friends, the Prices, Tha'mma's, the narrator's grandmother, ties with Dhaka and the later wrench from her roots, spontaneous communal combustion in 1964 in Dhaka claiming the lives of Jethamoshai, Khalil and Tridib pose the challenge of intercultural understanding and friendship in contemporary society divided by arbitrary demarcations of national boundaries. The narrator's mnemonic fund is enriched by his uncle and mentor, Tridib, who lets him in on the creative powers of memory and imagination. On the one hand is the narrator's family consisting of his grandmother, Mayadebi's elder sister, and his parents; on the other are Mayadebi, her husband, a diplomat, and their three sons, Jatin, an economist with the UN, Tridib and Robi. Jatin's daughter, Ila, is always away with her parents. While the narrator's family is settled in Calcutta where his grandmother is a schoolmistress, Mayadebi's family except Tridib keeps on going around the world. Tridib, who lives in his ancestral house in Ballygunge Place, is seen at a loose end at Gole Park among his adda acquaintances. Stay in close vicinity brings the narrator and his uncle Tridib together, although much to the dislike of Tha'mma, who is a stern middle class matriarch.

Tridib saw May Price as a little baby when he went to England with his parents in 1939. The friendship between the families began when Mrs Price's father, Lionel Tresawson, and Tridib's grandfather, Mr Justice Chandrashekhara Datta-Chaudhury, met in Calcutta at seances. By the time Tridib meets May in India in 1962, their friendship through correspondence since 1959 has ripened into love. The narrator who is Ila's age and is drawn to her apparently liberated charms loses his chance to

Nick Price, May's younger brother. It is May-Tridib relationship which is central to the thematic concerns of the novel. The narrator's close interaction with May who accompanied Tha'mma, Mayadebi and Tridib to bring his grandmother's uncle, Jethamoshai, from Dhaka to Calcutta and was witness to the killing of Tridib, is the most moving part of the novel. The narrator recalls his meeting with May at crucial point in the chronology of the novel: "I met May Price for the first time two years after that incident, when she came to Calcutta on a visit. The next time I met her was seventeen years later, when I went to London myself" (19)². The stretch of history during these seventeen years between 1962 and 1979 is the effective background of the novel against which the author evokes post colonial situations, cultural dislocations and anxieties, and interprets the issues of fractured nationalities in close and telling encounters.

The historical baggage shouldered by the novel includes the freedom movement in Bengal, the Second World War, the partition of India and the miasma of communal hatred breaking out into riots in East Pakistan (now Bangla Desh) following the Hazratbal incident in Srinagar in 1964. The novel is not a recapitulation of these historical upheavals; it catches alive the trauma of emotional rupture and choked human relations as also the damaging potential of the siege within people sundered by politics. The materiality of Ghosh's novel constituted by the web of material relations at a certain time in a certain location binds the narratives and authenticates the nexus between the historical moment and the fictive world. The reconstruction of the past through houses, photographs, maps, road names, newspapers, advertisements and other concretizations allows the reader to examine the text with diverse co-texts and validate the author's perception of the time and milieu covered by the novel. A close look at the principal episodes with reference to their historicity and materiality is significantly revealing in that the author's insight into the issues troubling the consciousness of characters can be identified and gleaned. "In *The Shadow Lines*," writes Nivedita Bagchi, "the very materiality of objects plays a vital role in validating the narrative. Tridib, we are told, is an archeologist, and the chief narrator is a history research fellow. The importance of material objects to the archeological-historian for validation of oral narratives, for dating and establishing chronology in the reconstruction of history,

cannot be overstated."³

The looping, non-linear progression of the narratives underpinned by the narrator and the historical sweep entail active and alert audience participation. In the opening lines the narrator refers to his grandmother's sister's visit to England and establishes the narrative framework :

In 1939, thirteen years before I was born, my father's aunt, Mayadebi, went to England with her husband and her son, Tridib. (9)

We gather that Mayadebi was born in 1910 and Tridib in 1931. The novel also telescopes the political ferment in Bengal and the upbringing of Tha'mma, who was born in 1902, and Mayadebi in the revolutionary decades of the present century. As soon as we infer the details of Mayadebi's visit to England, the narrative shifts to 1960 when Tridib first shared his experience of London with the narrator :

Over the years, although I cannot remember when it happened any more than I can remember when I first learnt to tell the time or tie my shoelaces, I have come to believe that I was eight too when Tridib first talked to me about that journey. I remember trying very hard to imagine him back to my age, to reduce his height to mine, and to think away the spectacles that were so much a part of him that I really believed he had been born with them. It wasn't easy, for to me he looked old, impossibly old, and I could not remember him looking anything other than old — though, in fact, at that time he could not have been much older than twenty-nine. In the end, since I had nothing to go on, I had decided that he had looked like me. (9)

Thus the narrative spills back and forth but all the episodes are held in simultaneous focus nonetheless to illuminate the major burden of the novel.

Chronologically, the story begins with a passage of time in colonial India when the narrator was not born. The year 1939 is historically significant for the outbreak of the Second World War and phenomenal changes caused by that agonising epochal event. Mayadebi's visit to London around this time, her warm and consequential contact with the Price family and Tridib—May component of the story is recounted by Tridib to the narrator twenty-one years later when the latter is an eight-year old in-

quisitive child. Although May was a little baby when Tridib saw her in London — and they have not met since then — a romantic relationship develops through correspondence between them, transcending the shadow lines of nationality and cultural boundary. Amitav Ghosh explores the mysterious pull between Tridib and May and the abiding intimacy between the two families, when the countries were pitted against each other. This search for invisible links ranging across the realities of nationality, cultural segregation and racial discrimination is the central theme of *The Shadow Lines*. The author questions the validity of geographical boundaries and celebrates the union of aliens pulled together by self-propelling empathy and attachment. Tresawsen and Mayadebi, Tridib and May, Jethamoshai and Khalil rise above the prevailing passion of war, hatred and communal bad blood and vindicate the political logic of partition and border demarcation to define national and cultural particularities. Ghosh's maturer view of reality was misread glaringly by Bruce King in his review of *In an Antique Land* in *World Literature Today*. The reviewer notes:

Amitav Ghosh's novels *The Circle of Reason* and *The Shadow Lines* are somewhat difficult to place on the current literary map; they have an unusual perspective and cover unexpected territory. *In an Antique Land* falls in some of the picture of how Ghosh sees the world and, besides the interest of the book itself as social anthropology and what it tells us about Ghosh, might be a starting place for future discussion of his fiction⁴.

Without questioning the merit of *In an Antique Land* this writer differs with the WLT reviewer's comments on *The Shadow Lines* in that the latter, as a seminal piece of fiction, does bring out the rare and remarkable talent of Ghosh who passionately searches for strategies for survival in a violent, hate-filled world of narrow divisions and finds in love the enabling and productive action to tide over separatist propensities of communities and nationality groups. The novel addresses the challenge of geographical fluidity and cultural dislocations with a new consciousness and firm grasp of socio-cultural and historical material. The experience of aliens and immigrants in post-colonial setting furnish us with the clue to the novel's larger project of cultural assimilation, friendship across borders and adjustment with the altered face of the world. The theme is first sounded when in a conversation with the

narrator in London in 1978 May Price shares her growing intimacy with Tridib:

Smiling at the memory, she told me how his card had reached her just when she was trying to get over an adolescent crush on a schoolboy trombonist, who had no time for her at all and had not been overly delicate about making that clear. It was nice to feel that someone wanted to befriend her. She had written back, and after that they had written to each other regularly — short, chatty letters, usually. Soon, penfriendship, they had exchanged photographs.(23)

The narrator recalls that Tridib's made-up story of his English relatives through marriage recounted to his adda acquaintances at Gole Park around 1960 sprang from his passionate longing for May :

Where have you been all this while, Tridib-da ! somebody said. It must be three or four months ... I've been away, I heard him say, and nodded secretly to myself.

Away! Where!

I've been to London, he said. To visit my relatives.

His face was grave, his voice steady.

What relatives!

I have English relatives through marriage, he said. A family called Price. I thought I'd go and visit them.

Ignoring their grunts, he told them that he had been to stay with old Mrs Price, who was a widow. Her husband had died recently. She lived in north London, he said, on a street called Lymington Road; the number of their house was 44 and the tube station was West Hampstead. Mrs Price had a daughter, who was called May.(17)

Tridib realizes May concretely and warmly in his imagination with all the attendant excitement stored in his senses. He can visualise her shape and appearance precisely even without meeting her. Their love has intrinsic reality; it crosses all borderlines and shadow lines. The narrator also owes his broadened horizons to Tridib's influence. He has become an imaginative traveller of distant locations beyond the limits of his mind and experience at a fairly young age. He is verily enamoured of Tridib, who had pushed him to "imagine the roofs of Colombo" for himself and had said that "we could not see without inventing what we saw, so at least we could

try to do it properly" (37). The narrator's psyche absorbs cross-cultural interactions and sheds particularity of his origin and narrow nationalism fostered and instilled in him by his grandmother. Unlike Ila's pragmatic cosmopolitanism; either lukewarm or lacking in vibrant reciprocity, the narrator learns the lesson of love and sacrifice untrammelled by exclusionary nationalism and spatial limits, first under the spiritual tutelage of Tridib, and, later, in the warm embrace of May towards the close of the novel. He contrasts the cross cultural perspectives of Tridib and Ila at several places in the novel. For instance:

I tried to tell her, but neither then nor later, though we talked about it often, did I ever succeed in explaining to her that I could not forget because Tridib had given me worlds to travel in and he had given me eyes to see them with; she, who had been travelling around the world since she was a child, could never understand what those hours in Tridib's room had meant to me, a boy who had never been more than a few hundred miles from Calcutta. I used to listen to her talking sometimes with her father and grandfather about the cafes in the Plaza Mayor in Madrid, or the crispness of the air in Cuzco, and I could see that those names, which were to me a set of magical talismans because Tridib had pointed them out to me on his tattered old Bartholomew's Atlas, had for her a familiarity no less dull than the lake had for me and my friends; the same tired intimacy that made us stop on our way back from the park in the evening and unbutton our shorts and aim our piss through the rusty wrought-iron railings. (26)

Yet the narrator is hooked on to Ila's exotic appeal. It is her striking foreignness, her western ways and easy informality that attract him. Her liberated gestures and overtly offbeat demeanour arouse Tha'mma's contemptuous dislike for her. While the narrator develops a mesmeric fascination for Ila in the flush of adolescence, his grandmother hates her vulgar transgressions. Ila's preference for Nick Price and her later disappointment expose her wobbly transplantation in the western culture. Her dislocation stems from her penchant for illusions devoid of any real understanding of the cultural interface. The adult narrator sees through Ila's hidden anxieties and discomfiture. Her last words in the novel are aimed at consoling the narrator and her cousin

that everything is all right between her and Nick. Commenting on Ila's role in the novel, Suvir Kaul notes that she is central to the narrator's coming-of-age and functions "as a narrative scapegoat, a figure who acts as a lightning-rod for a great many sexual and cultural anxieties, and the telling of whose unhappy and even sordid itinerary, especially her relationship with Nick, takes on all the cautionary tones of a modern fable".⁵ Nick-Ila pairing is a counterpoint to Tridib-May kinship in the thematic framework of the novel. When the narrator looks at Ila's seductive foreignness with untinted eye in his mature stage, he notices her snooty ways and cultural contradictions. Significantly, the novel ends with May and the narrator lying in close embrace after the former has recounted Tridib's tragic killing in Dhaka. May interprets Tridib's act as sacrifice and defines the manner of his giving up his life while rushing to Jethamoshai for his unsuccessful rescue from the frenzied rioters. Tridib appreciates May's ideals of humanitarianism and acts like her soul-mate. Jean Sudrann makes a perceptive comment on the thematic concerns of Amitav Ghosh :

As in his first novel, *The Circle of Reason*, where Ghosh pitted rationality against emotion as warring forces within and among people, so here the conflict has been resumed in epistemological terms. Knowledge can set us free, but only if it is bred of heart as well as head. May's love — of the narrator, of Tridib, of the cycle-rickshaw man, of the hate-filled lawyer — which prompts her to reveal her innermost thoughts to the narrator, releases him from the silence which is outside his intelligence into the perhaps equally unspeakable mystery of love.⁶

The novel insists on the imperatives that assure empathy and unimpeded flow of friendship, and mock the conception of militant nationalism, exclusive national pride and identity. The outbreak of communal strife in Dhaka following the disappearance of the prophet's hair in Srinagar exposes the fragile demarcation of political frontiers. The author's postcolonial angst for the disrupted subcontinental commonality and snapped cultural bonds is evident in the instant communal reaction to the Hazratbal incident in Calcutta and Dhaka. Tha'mma's ideals of nationalism nurtured since the Swadeshi movement do not stand the test of time. Hers is a misplaced sense of pride reminiscent of the 'tardy late-bourgeois world.' Drawing national borders with blood is bound to be undone by the

inherent logic of and propensity to separateness and division. Her senile old uncle has a grasp of ambiguous and tenuous geographical boundaries: "Once you start moving you stop never stop. That's what I told my sons when they took the trains. I said: I don't believe in this India-Shindia. It's all very well, you're going away now, but suppose when you get there they decide to draw another line somewhere! What will you do then! Where will you move to! No one will ever have you anywhere. As for me, I was born here, and I'll die here" (216).

The message of the novel underlines the need of friendly ambience for coexistence and humanitarian ties across cultures independent of political managers. The 'indivisible sanity' of people beyond borders has the potential to ensure warm and wholesome international amity and exorcise divisive streaks and madness. Mayadebi and Tresawsen realise the palpable evidence of this desire among people both in England and Germany even as the Second World War is looming ahead :

Well, she said, laughing, the couple of months she had spent in London had been so exciting — the atmosphere had changed so dramatically, even within the last few weeks. People were becoming friendlier; in the shops, on the streets, she couldn't help noticing. Everyone was so much nicer now; often when she and Tridib were out walking people would pat him on the head and stop to have a little chat with her; the shopkeepers would ask her how her husband was, and when he was to have his operation. But it wasn't just her — everyone was being friendly with everyone; why just that morning his sister, Elisabeth, had said that old Mrs Dunbar who lived down the road had actually been civil for the first time in living memory ... Yes, he said, that's true — there's a kind of exhilaration in the air.

Yes, that's the right word, said Mayadebi : exhilaration.

I've been lucky, I've been lucky to watch England coming alive. I wouldn't have seen that if I hadn't been here now.

Tresawsen laughed. People don't believe me, he said, but it's the same over there — in Germany — though of course in a much more grotesque way. It was odd coming back here — like stepping through a looking glass. (70-71)

The narrator with his expanded horizons and imaginative understanding of the world caught up in the vortex of violence and murderous rampage stresses the urgency of preserving the memories of saner and humane transactions for cultural self-determination and inter-personal communication. The media and public memory must keep alive the 'indivisible sanity' of communities to prevent recurrence of insane frenzy. Ghosh has edged up his novel to confront the memory of traumatic events and shake up our indifference to the gathering potential of tragedy. "All in all, the novel is an eloquent critique of colonial hangover and cultural dislocation in postcolonial situation as also the psychological make-up of the contemporary man who thrives on violence" Amitav Ghosh projects these genuine Indian vibrations with remarkable competence.

End notes

1. Tzvetan Todorov. *A Dialogic Criticism: Literature And Its Theorists*. Trans. Catherine Porter. London, Routledge & Kegan Paul, 1988. 164.
2. Amitav Ghosh. *The Shadow Lines*. London, Black Swan, 1988. p 19.
3. Nivedita Bagchi. "The Process of Validation In Relation To Materiality And Historical Reconstruction In Amitav Ghosh's *The Shadow Lines*." *Modern Fiction Studies* 39; Winter 1993: 187-201.
4. Bruce King. "In an Antique Land." *World Literature Today* 68(1-2); 1994: 430.
5. Suvir Kaul. "Separation Anxiety: Growing Up Inter/National in Amitav Ghosh's *The Shadow Lines*." *The Oxford Literary Review* 16; 1994:125-145.
6. Jean Sudrann. "Goings and Comings," *Yale Review* 79; 1990 : 414-438.
7. G.R. Taneja. "The Shadow Lines," *World Literature Today* 65(1-2); 1991:365.

TO OUR READERS

Knowledgeable and perceptive as they are, our contributors must not necessarily be allowed to have the last word. It is for you, the readers, to join issues with them. Our columns are as much open to you as to our contributors. Your communication should, however, be brief and to the point.

The Moral Energy

Eminent Journalist, Mr. V.N. Narayanan, Editor, The Hindustan Times, delivered the Convocation Address at the XV & XVI convocation of the Nagarjuna University. He said, "When we face problems of ethics, we tend to solve them by research, by statistics, by the use of instruments and resources rather than by moral energy. The Victorian society in Britain, the pre-Independence Congress party under Mahatma Gandhi, Abraham Lincoln's era in U.S. politics displayed this moral energy. This is not to be confused with excessive puritanism or moralism. All it demanded of the people was the feeling that they were put on this earth in order to leave it a better place than you found it." Excerpts

There were days when only scholars were invited to deliver convocation addresses because, in the past knowledge was power. Today everyone recognises that information is power and so you invite journalists. There is a complementarity about knowledge and information; about the functions of scholar and journalist — the kind of complementarity referred to by Mark Twain when he said that between him and Rudyard Kipling they covered the entire gamut of human knowledge. "Kipling knew all that is worth knowing and I know all the rest". Thereby the great American humorist emphasised the essential difference between the pursuit of knowledge and the gathering of information; between the institutions of learning and the mass media. Oscar Wilde once said that journalism, by giving us its illiterate views, helps us keep in touch with the ignorance of society. To be fair to my own profession, spreading illiteracy and ignorance has been the principal task and crowning achievement of our educational institutions. Bernard Shaw said that the only time his education was ever interrupted was when he was at school and Ivan Illich felt that the only

way to save education was to "de-school society".

Modern society with its system of education and values has institutionalised human needs and mechanised their minds. We are all conditioned to confuse teaching with learning, grade acquisition with education and getting a degree with the obtaining of skill and competence.

That definition about journalism is not a mere joke. It emphasises the huge chasm between wisdom and knowledge and between knowledge and information. Let me give you an example from the not too distant past about two bits of news emanating from Britain. The first was about the claim of two scientists that they had succeeded in achieving the fusion of atoms in the laboratory at room temperature. This, if true, could be as momentous and epoch-making a development as the splitting of the atom six decades ago. Yet how many of our newspapers publicised it, analysed its implications? And how many of you had even read it? And the other bit of news was about one Pamela Bordes, to hold whose hands the royal household, the British MPs and newspaper Editors, queued

up all the time. The British tabloid press would not leave Pamela alone. Why? Because atomic fusion is knowledge; but Pamela Bordes is cashable news.

Six years ago an American social scientist wrote a book that shook the US society. The book titled *The Closing of the American Mind* by Allan Bloom has a long sub-title *how higher education has failed democracy and impoverished the souls of today's students*. Professor Bloom's thesis is simple. The universities and schools (all over the world, not merely in the USA) are swamped with intellectual atrophy bred by the explosion of scientific inventions, technological gadgets and the resultant boom in anti-establishment doctrines which proclaim that nothing is absolute, everything is relative and all values are equal. This has led to the emergence of what is called the cafeteria curriculum which swears by openness and equality to the doctrine of culture and values. Most students wallow in this "value-free education" first of civilisation and ignorant of their own rich heritage and culture. The most notorious image from Prof. Bloom's book is his portrayal of a 13-years old student doing his homework to the "masturbational fantasies" of rock music on his stereo blissfully unmindful of the fact that he is "enjoying the liberties hard won over centuries by the alliance of philosophical genius and political heroism".

What is the prescription? Is there a saving grace? Prof Bloom says that salvation lies in going back to the classics. The British have arrested their slide downwards by their continuous love affairs with Shakespeare. We Indians, too have terminated our

own love affairs with Kalidasa, Kamban and Kabir; the Chinese are paying the price for sidelining Confucius and swearing by Mao.

Too much knowledge and too much information have served to reduce our sense of responsibility; there is a decline in our sense of God and consequently a decline in our respect for other people. We are too ready to find reasons why people behave in specific ways. There is so much of analysis — imagine the plays of Shakespeare and Kalidasa dissected by the modern social analyst in terms of the feminist view, the civil libertarians' concept and the rich-poor disparities — that the sciences have encouraged determinism in man even as religious fundamentalism does in certain parts of the world. Since science explains everything, yes everything, we have reduced even morality to explanation. When we face problems of ethics, we tend to solve them by research, by statistics, by the use of instruments and resources rather than by moral energy. The Victorian society in Britain, the pre-Independence Congress party under Mahatma Gandhi, Abraham Lincoln's era in U.S. politics displayed this moral energy. This is not to be confused with excessive puritanism or moralism. All it demanded of the people was the feeling that they were put on this earth in order to leave it a better place than you found it. Putting it differently, as the delightful character of P.G. Wodehouse, Lord Ickenham did, the aim must be to "spread sweetness and light" and leave the place a little less of a hellhole than it was when you arrived there. When people leave out God from their lives, they become less than human, being devoid of that moral energy. It is

because man has by scientific deduction eliminated the concept of heaven that he is unable to build a tolerable society on earth.

To me, modern society resembles a toy that I saw in an American toy shop years ago. It is a metal casket which, when you pressed a switch, opens itself to reveal a mechanical hand. As you watch, the hand reaches out for the lid, pulls it down and locks the casket from inside. You see the box, you expect to find something in it when it opens and all it has is a mechanism to close the box. The contraption is modern science's ultimate answer to the Pandora's Box. It seeks to prove that man has developed the frustrating power to ask for anything because he cannot visualise anything which a human institution cannot do for him. Surrounded by all-powerful tools, we have become tools of our tools.

Cardinal Hume, asked what saddened him most about modern society, said after an inordinately long pause: "the loss of truth". Having lost the truth, we are trying desperately to prove our lies and believe in our lies. We are all like the Indian merchant who went to heaven and found it overcrowded with Indian merchants. Unable to find adequate place for himself, he thought of an idea. "They have mined gold in hell", he said in a loud voice. Sure enough, there was an exodus and heaven was empty. Instead of enjoying the large space for himself, he too started leaving. Asked why, the merchant said "Well, didn't you hear. They have found gold in hell".

What a tragedy it is for us, the world's oldest civilised people! Science today is arriving at basic

conclusions which our ancient "thought scientists" — the rishis — clearly perceived thousands of years ago. Our Vedas and Upanishads had taught us that the spirit, supreme and unchanging pervades the entire universe. The material world cannot explain the nature of the Spirit. For them all matter is energy and inorganic substance is never without life. There is a unity that underlines all creation and life. Recent advances in science bear this out, albeit in scientific and mathematical terms. Sir James Jeans declared that the stream of modern knowledge is heading towards a non-mechanical reality. What else is that except *Brahman* that sage Bhrigu went in search of! As science marches from gadgetry to truth, it comes closer to Vedanta.

Such is our heritage — and yet we seldom turn to it. We should all be asking (with T.S. Eliot) :

"Where is the life we have lost in living?

"Where is the wisdom we have lost in knowledge?

"Where is the knowledge we have lost in information?

Well, it is all there, not in the newspapers, of course. It is like the sunrise in Kanyakumari — if you are in bed or looking Westward you miss it.

Since wisdom has its limits and folly has none, we may have to heed Adi Shankara's advice to attain salvation. He says :

*Bhaja Govindam, Bhaja Govindam
Bhaja Govindam, mooda mathe;
Samprapte sannihite kale
Nahi, nahi rekshati tukrunj
karane.*

You silly mind, pay obeisance to Govinda. For when the hour comes, your great dialectical skill will not save you.

The hour is here.

IIT-Delhi Plans MBA Courses

The Indian Institute of Technology, Delhi proposes to start two master of business administration (MBA) courses from the next academic session.

The institute will introduce a two-year full-time MBA programme in management systems and a three-year part-time MBA course in technology management from July 1997. The admission tests for these courses will be held on December 21.

Under the new scheme of two-year programme, a student will have the opportunity to opt for dual specialisation in management systems and a functional topic such as strategic management, organisation management, information technology, finance and marketing.

In the three-year programme, the concentration will be on technology management besides a specialised topic for study.

The programmes are aimed towards bridging the gap between the demand and supply of high quality management education which is necessary to face the challenge in the emerging corporate sector.

The programmes are open to engineering graduates as well as postgraduates in physical sciences, computer applications, operations research, commerce and economics.

The full-time course being introduced is partly self-financed. A student will have to pay Rs. 25,000 per semester. A student who is an engineering or

technology graduate, an M.Sc. in physics, chemistry, mathematics or a masters degree holder in statistics, operations research, computer applications, economics and commerce with more than 60 per cent marks is eligible to apply.

But for the part-time programmes, only sponsored candidates with two years of experience, in addition to other educational qualifications will be considered for the admission.

Distance Educators Meet

The fourth annual conference of the Indian Distance Education Association (IDEA) was held at Dr. B.R. Ambedkar Open University campus in Hyderabad recently. The speakers at the conference stressed the need for strengthening student support system in open learning and distance education institutions.

Prof. V.S. Prasad, Director, Distance Education Council, Indira Gandhi National Open University, in his keynote address said learner-centredness was considered an important character of distance education, like people-centeredness in democratic polity and consumer-centredness in capitalist market system. The learning process should be designed keeping in view the requirements and the conveniences of the learner.

Prof. Bakshish Singh, President of IDEA, said latest communication technology should be put to maximum use in supporting

students who were spread in far-flung areas. Prof. G.J.V. Jaganadha Raju, Chairman, AP State Council for Higher Education, said that students should be given an option to transfer their courses from formal to non-formal and vice-versa in order to reduce the load on formal education system. This would also help students to go at their own pace according to their convenience, he observed.

Roorkee Varsity's 150th Anniversary

Roorkee University, the first engineering institute of independent India that has made an outstanding contribution in the field of development of technology in the country, is celebrating its 150th anniversary.

Roorkee college, the forerunner of the University of Roorkee, was established in 1847 as Thomson Engineering college. In recognition of its performance and potential and keeping in view the needs of post-independent India, Pandit Jawaharlal Nehru presented the charter in November 1949 elevating the erstwhile college to an engineering university.

Since its establishment, the University of Roorkee has played a vital role in providing technical manpower and knowhow to the country and in pursuit of research. Students from over 50 countries including the U.S., Japan and China have been alumni of this university. Besides the education of foreign students as normal activity, the university has undertaken education of special

groups of students from abroad.

Bachelor's degree courses are offered in ten disciplines in engineering and in architecture; 55 postgraduate degree courses are offered in engineering, applied science, architecture and planning. The university has facilities for doctoral work in all departments and research centres. It has made considerable contributions to international cooperation, particularly with developing countries. The Water Resources Development Training Centre was set up in 1995 with an assistance of ESCAP, U.S. technical cooperation mission and U.N. Technical Assistance Board, with the objective of training engineers from Asian and African countries. It offers postgraduate programmes in the field of water resources development. The University has so far trained about 600 engineers from 37 countries.

The present ongoing Ford Foundation project that envisaged setting up a Department of Hydrology was started in 1972 with assistance of UNESCO and IDRC, Canada, initially as an international course in hydrology and later transformed to be an academic department. The department of hydrology has so far trained nearly 550 hydrologists from 32 countries.

In order to provide motivation, training and infrastructural support to entrepreneurs, the Science and Technology Entrepreneurship Park (STEP) was established in 1987.

The Centre for Continuing Education conducts short term specialist and refresher courses for serving engineers. It has so far organised 750 courses which were attended by 10,500 engineers. The university has been giving increasing attention to

sponsored research and consultancy activities. It has now a strong institute-industry interaction cell. A large number of distinguished organisations interact with the university through research and consultancy which bear testimony to the important role played by the university directly in national development.

At present 27 research centres are functioning in the university including industrial automation and robotics, off-shore engineering structures, water resources management, hybrid micro-electronics, appropriate technology for rural development and hilly regions.

The most conspicuous feature of the university is that the academic directions, framework and content are all the time conceived to be relevant to Indian needs and Indian society.

University graduates are employed in various private and public sector organisations. On an average 65 selection teams visit the university annually for on-campus recruitment and more than 70 per cent students get proper placement during their final year of studies.

According to latest data available from UPSC, the highest number of selected candidates in engineering services examination is from Roorkee University.

IGNOU Plans Capsule Courses

Indira Gandhi National Open University (IGNOU) proposes to launch courses in Environmental Management, Management of NGOs and Cooperatives, Marketing Strategy, Technology Management and Public Systems Management. This was disclosed by Prof. Rakesh Khurana, Pro-Vice-Chancellor of the University

in his paper presented at a national workshop on *Vision-20-21: Alternative Paradigms for Management Education* in New Delhi recently.

IGNOU proposes to offer capsule programmes in different areas through technology aided interactive delivery system under the project "Management Education through Interactive Delivery System".

From April 1997, IGNOU proposes to launch 20 capsule courses on areas as diverse as Human Resource Planning, Working Capital Management, Management of Information Systems, Management of Public Enterprises, Security Analysis and Portfolio Management and Management of new and small enterprises.

Entry to these programmes is relatively relaxed and no en-

Dr. N.S. Randhawa Passes Away

Dr. N.S. Randhawa, former Director General of the Indian Council of Agricultural Research, died on 25 November 1996.

Dr. Randhawa received the "Padma Bhushan" for his contributions to soil science and agricultural development in the country. He started his career as research assistant at Punjab Agricultural University (PAU) and rose to the position of Director-General of the ICAR and Secretary, Government of India, the highest position for an agricultural scientist in the country.

During his stay at the PAU, Dr. Randhawa established the role of micro-nutrients especially zinc in soil fertility.

trance test is proposed. Non-graduates with work experience can also be enrolled for these programmes.

The programmes are expected to be offered in two cycles per year with the duration of each capsule being one semester or five or six months.

New Equipment for Brain Surgery

A novel and safe method to operate brain tumors was introduced at the Sri Venkateswara Institute of Medical Sciences' multi-speciality hospital. This method called "CT Guided Stereotactic Method" combines the use of a CT scanner along with sophisticated brain surgery equipment.

Mr. Vedantam Rajasekhar, Professor of neuro-surgery, CMC Hospital, Vellore formally inaugurated recently the new equipment by performing an operation. He said the new procedure would avoid major opening of brain during operations.

Speaking on the occasion, Dr. C. Surya Prakasa Rao, Director of SVIMS said this method had a 100 per cent accuracy. The operation is safe because it does not entail the patient having to undergo conventional brain surgery with its many attendant hazards and complications.

Also it is extremely suited for areas within the brain where conventional brain surgery cannot be performed because it is very risky.

Apart from its diagnostic and therapeutic capabilities for deep-seated or small brain tumors, it has other applications such as in reducing the tremor in Parkinson's disease.

Roorkee Varsity Convocation

Mr. Romesh Bhandari, Uttar Pradesh Governor and Chancellor, Roorkee University called upon the students to join the battle against poverty by developing better technologies, harnessing the vast resources and better management of production and distribution; so that the endeavour to improve the quality of life of the people in the country could be fruitful.

Mr. Bhandari was speaking at the 46th annual convocation of the University of Roorkee. He said that India had no other choice but to harness technology to improve the quality of life of the people at large. "We cannot afford to limit the role of technology to a mere intellectual exercise," he observed. He was of the opinion that in the days of fast-changing technology, a modern engineering university needed constant updating of its infrastructure. He felt that it was no longer possible for the State alone to provide financial support for the purpose. "The faculty will have to put in special efforts to raise additional resources through extension work.

Speaking on the occasion, Dr. Manmohan Singh expressed his anguish over the fact that while the world in the final round counted the strength of power only, India was lagging in the sub-continent.

He called for development of strength to fight against poverty. He said India ought to become strong enough to withstand not only domestic competitions but international competitions also. However, he cautioned that while gearing up for a better and stronger modern nation, one ought to ensure smooth functioning so that in the process it did not lead to

unemployment or closure of industries.

He hoped that India would one day become a stimulator of creativity and not a destroyer of what already existed on the ground. "Gear up so that the world takes us seriously as a trader in economic power for a global welfare", he advocated.

Mr. Bhandari conferred the honours is causa degrees to former Finance Minister Manmohan Singh and Secretary, Department of Science and Technology, Mr. P. Rama Rao. Vice-Chancellor Navin C. Nigam gave away 743 degrees and diplomas and 187 medals and prizes.

On this occasion Mr. Bhandari also unveiled a statue of Pandit G B Pant on the campus.

New Courses at Kurukshetra Varsity

Kurukshetra University is reported to have started a number of new courses in the past six months. The certificate course in physical education for appointment as PTIs has been introduced.

Similarly, the university has decided to introduce bachelor of business administration (BBA) and certificate and diploma courses in French, German and Russian through correspondence. The BBA course will be of three-year duration after 10+2. It has also decided to introduce M.Phil in some popular subjects like Hindi, political science, history, economics and Punjabi through the Department of Distance Education.

Kamalnayan Bajaj Memorial Lecture

Prof. Adolfo de Obieta known as Gandhi of Argentina and recipient of 1996 Jamnalal Bajaj International Award for promoting

Gandhian Values outside India, delivered the Kamalnayan Bajaj Memorial lecture at Gujarat Vidyapith, Ahmedabad.

He said, 'Working to promote Gandhian Values is like striving to raise relationship from a spirit of competitiveness to that of co-operation, from isolation to collaboration and from hegemonic individualism to creative solidarity'. He emphasised the positive fallout of preaching Gandhiji and said that with or without recognition of Gandhi's influence, with or without recognition of his doctrine of non-violence, the spirit of non-violence was spreading in the world

Prof. Ramlal Parikh, Chancellor, Gujarat Vidyapith, presided.

Women in Science, Technology and Management Education

The Institute of Advanced Studies in Education of the Rohilkhand University proposes to organise a national seminar on Women participation in Science, Technology & Management on 13-15 Feb. 1997. The main themes of the seminar are : (1) Status of Women Education (2) Gender-sensitivity and Barriers in Education (3) Perspective of Women Career in India (4) Appraisal of Women involvement in Science, Technical and Managerial Activities (5) Women empowerment and strategies to facilitate equal participation.

Further details may be obtained from the Director, Institute of Advanced Studies in Education, Rohilkhand University Bareilly-243 006.

We Congratulate ...

Prof. R.R. Sharma who has been appointed Vice-Chancellor of the University of Jammu, Jammu.

News from Agricultural Universities

Breakthrough in Biofertilizers

Microbiologists at Chaudhary Charan Singh Haryana Agricultural University (CCSHAU) have succeeded in tracing out some strains of a bacterium, Azotobacter that are capable of solubilizing existing phosphate in the soil into available form to the plants. This was disclosed by Dr. T.M. Verghese, Dean, College of Basic Sciences in Hisar recently. This will, he said, cut short the use of phosphatic fertilizers and add more to the profit of farmers as they would need to supply less quantities of this very kind of fertilizer.

This is the second achievement of the university in biofertiliser production. Earlier, the scientists of Microbiology department had identified strains of the bacterium efficient in fixing free atmospheric nitrogen in the soil and started their mass production for sale to the farmers. The strains have been found to increase the yield of wheat, mustard and bajra. The scientists claim increase with the application of this biofertilizer from 2.5 - 4 quintals of grains per hectare in wheat and 2-2.25 quintals per hectare in mustard and bajra.

However, cultures of another bacterium, Rhizobium that have the same role in pulses, have been gaining popularity amongst the farmers. An increase in yield from 10-15 per cent with the application of Rhizobium had been recorded by the scientists.

According to Dr. Hem Raj Sharma, Incharge of the biofertilizer project, sixty thousand packets of Rhizobium culture were sold to the farmers last

year, whereas the figure for Azotobacter culture stood at thirty five thousand packets. Each packet is priced at Rs. 5 and generally one packet is sufficient for one acre of land, said Dr. Sharma.

Although biofertilizers were ecofriendly and capable of enhancing crop yields, yet they could not get popularity to the desired level among the farmers. Dr. A.L. Khurana, Head of Microbiology Department, however, said that a team under the leadership of Dr. Lakshminaryan had been demonstrating all over the state the utility of these soil bacteria. He said that efforts were also being made to work out a collaborative project for this purpose with the Agro Industries Corporation of Haryana.

ICAR, ICARDA Tie Up

The Indian Council of Agricultural Research (ICAR) and the International Council of Agricultural Research in Dry Areas (ICARDA), Syria, recently signed a triennial workplan for 1996-98 for cooperation in the area of pulses, wheat and barley research. This includes participation in international germplasm evaluation nurseries programme, cooperation in basic and strategic research for improvement of yield and quality of these crops and exchange of scientific information on them.

The Director-General of ICAR, Dr. R.S. Paroda, signed the plan for ICAR and the Director-General, ICARDA, Dr. Adel El-Beltagy, signed it for his organisation. The plan envisages cooperation in research on Kabuli

chickpea resistant to disease, cold and drought. The Kabuli chickpea has higher market demand and export potential than the traditional (*desi*) variety which is produced in limited quantities due to unsuitable temperature.

The cooperation with ICARDA will help India develop the Kabuli chickpea suitable to Indian conditions. It is envisaged that for north India, the high yielding cold tolerant varieties could be developed through co-operation in exchange of breeding materials and combined scientific studies.

India also hopes to gain from ICARDA's lentil breeding programme. The crop suffers

from rust disease in the country, particularly in the northern parts, where it is grown in rice fallows. The collaboration will help India develop rust-resistant varieties and in developing bold seeded lentil variety for central India. The agreement will also involve development of low BOAA content lathyrus.

It is also proposed to develop drought resistant varieties of durum wheat which had a high export potential. The new varieties sought to be developed are high-yielding, drought tolerant and disease-resistant. There will also be cooperation on evolving superior quality malting barleys.

News from UGC

Countrywide Classroom Programme

Between 16th and 22nd December, 1996 the following schedule of telecast on higher education through INSAT-ID under the auspices of the University Grants Commission will be observed. The programme is presented in two sets of one hour duration each every day from 6.00 a.m. to 7.00 a.m. and 1.00 p.m. to 2.00 p.m. The programme is available on the TV Network throughout the country.

1st Transmission

6.00 a.m. to 7.00 a.m.

17.12.96

"Warehouse Categories"
"Material Testing - I"
"Wormact"

19.12.96

"Special Education for Disabled"
"Relevance of Reading Creative Writing"
"Optical Properties of Minerals in Transmitted Light - I"

21.12.96

"Debate on Economic Re-

forms - Gender and Economic Reforms - III"

"Jute the Friendly Fibre - I"

22.12.96

"Non-Industrial Glazed Pottery and Development in India - II"

"Indian Stick Fighting - I"

Hind Transmission

1.00 p.m. to 2.00 p.m.

16.12.96

"Question Time"

"Sugar Science - III : Breed-

ing Technique - I"

17.12.96

"Silver"

"Unmasking Alphabets"

"Neck Surgery : Malignancy Larynx Sound Box Cancer"

18.12.96

"Energy Efficiency for Top and Senior Executives in Industry"

"Design - IV : Education"

"In the Eye of an Insect"

19.12.96

"Handicraft - The Ballad of Creation"

"Who is Afraid of Speaking English"

20.12.96

"Cosmic Sparklers"

"A Breath of Fresh Air"

21.12.96

"The Story of Indian Painting - VIII : The Bengal School"

"Family Series : At the End of the Day - II (Australian)"

22.12.96

No Telecast

Hindi Telecast

प्रातः 6.00 से 6.30 बजे तक

16.12.96

"लिटिल नॉलेज इज ए डेन्जरस थिंग - I"

"कशीदा"

18.12.96

"हस्तशिल्प सौन्दर्य गाथा"

20.12.96

"प्रेमयोगिनी मीराबाई - II"

"भक्तित्व एवं काव्य"

Awards and Medals

Meghnad Saha Awards

The Meghnad Saha Awards — 1992 and 1993 for original writing in Hindi in the field of engineering, physics, chemistry and biological sciences have been announced.

Dr. Gunakar Mulay has been awarded the first prize for both 1992 and 1993 for his writing in

physics, while Dr. Yatish Agarwal has been awarded the first prize for 1993 in the biological section. Dr. Agarwal has also been awarded the second prize for biology for the year 1992.

Dr. S.M. Kanwar has been awarded the first prize in the biology section for the year 1992.

No awards have been given for engineering and chemistry for the year 1992.

UNEP Award for Dr. Khoshoo

The United Nations Environment Programme (UNEP) has conferred its "UNEP-Sasakawa Environment Prize for 1996" on the eminent Indian scientist, Dr. Triloki Nath Khoshoo, for his contribution to the protection and management of the environment.

The prize, worth \$200,000, is one of the most prestigious environmental awards in the world. Past winners include Mr. Chico Mendes of Brazil, Dr. M.S. Swaminathan and Prof. Lester Brown of the U.S. Dr. Khoshoo is known for his conservation work in cytogenetics, biological diversity, biomass production and environmental research and development. He has generated considerable new knowledge regarding the genetic-evolutionary race history of a number of plants

Asutosh Medal for Raja Ramanna

Dr. Raja Ramanna, an eminent nuclear scientist, has been selected for the Asutosh Mookerjee Memorial Award instituted by the Indian Science Congress Association (ISCA) for 1996-97. Dr. Ramanna is honoured with the award for his outstanding contribution to the advancement of science. The prestigious Asutosh Mookerjee gold medal will be presented to Dr. Ramanna by the Prime Minister at the inaugural session of the 84th Indian Science Congress to be held in Delhi on January 3, 1997. Dr. Ramanna has been working on a "new approach to nuclear physics".

Road Research Award

Prof. A.K. Gupta, Director of Central Road Research Institute, New Delhi, has been selected for the Prof. S.R. Mehra Memorial Research Award for this year. Named after eminent scientist S.R. Mehra, the award has been given to Prof. Gupta for his pioneering work in highway traffic and transportation engineering. The award carries a cash prize of Rs. 20,000 and a citation.

Greek Honour for Prof Arora

Prof. U.P. Arora of Rohilkhand University, Bareilly, has been awarded the Golden Cross of the Order of Honour by the Greek Ambassador, Mr. Constantine Aillianos.

The honour was conferred on Prof. Arora in recognition of his efforts to promote cultural relations between India and Greece, particularly his research on "Greco-Indian relations in Antiquity."

News from Abroad

Award for Innovation in Higher Education

The American Association of University Administrators (AAUA) announces an annual award to recognise innovation and achievement in higher education worldwide. Known as Nikolai N. Khaladjan International Award for Innovation in Higher Education, the award itself is a silver academic medal to be presented at the annual AAUA National Assembly. The first award will be made at the next assembly, June 28 to July 1, 1997, in Denver, Colorado.

Nikolai N. Khaladjan is the founder and president of Moscow External University of the Humanities (MEUH). From its beginning in 1991, it has become with its affiliated institutions the largest higher education institution in Russia, with over one hundred thousand students enrolled in independent learning or distance education. MEUH is united by a common educational method which concentrates on student-centred and student-directed learning.

Any higher education institution in the world is eligible to compete for this award but the sponsors of the award are especially interested in recognizing : innovative teaching and learning methods; methods which widen access to education; extension of or more efficient use of teaching resources; wide use of or development of learning technology; and efforts that accelerate or deepen student learning.

The award will be given to the nomination judged the most innovative and having the widest potential for application or impact on post-secondary education.

Institutions may be nominated by their own officials or by their students, third parties, organizations, vendors, public officials, or learned societies.

The last date for receipt of nominations is March 17, 1997. Further details may be obtained from Jerome L. Neuner, AAUA International Liaison Chair,

Canisius College, 2001 Main Street, Buffalo, NY 14208 USA.

CIES Annual Conference

The 41st annual meeting of the Comparative and International Education Society is being held at Mexico City on March 19-23, 1997. The theme of the conference will be "Education, Democracy, and Development at the Turn of the Century". The theme harbors great possibilities for intellectual dialogue about the past, present, and future of the discipline of comparative and international education; the role of international organizations and aid; new developments in social theory (critical modernism, postmodernism, poststructuralism) and their ability to shed light on the processes of cultural, technological, and political transformation brought about by the process of globalization; as well as a host of highly specialized topics. Thus the conference will address issues of equity, equality, and relevance of education and educational reform, including questions concerning the relationships between poverty and education; minority education; the linkages among technology, education and democracy; at-distance education; educational evaluation; and the relationships between education and culture in an era of accelerated technological change.

The conference will highlight international initiatives — such as the North American Free Trade Agreement — with lasting impacts on the educational process. The issues of cross-border accreditation in higher education, multi-campus and cross-national courses taught in the spirit of NAFTA

business exchanges, issues of language of instruction and culture, and video-conferencing as an alternative to on-site instruction, shall also be deliberated.

Further details may be had from Edward Trickey, c/o Carlos Torres, UCLA Latin American Center, 10343 Bunche Hall, Los Angeles, CA 90095-1447.

NATIONAL INSTITUTE OF EDUCATIONAL PLANNING AND ADMINISTRATION

17-B, SRI AUROBINDO MARG, NEW DELHI -110016

Applications are invited for 6 posts of Fellows in the pay scale of Rs. 3700-125-4950-150-5700. The qualifications, experience etc. are as under:

Age : Preferably below 45 years

Qualifications : Essential

- i) Should have consistently good academic record with first or high second class (B+) Master's degree in relevant field of study or an equivalent degree of a foreign university.
- ii) Either a doctorate degree of an Indian or foreign university or published research work of a high standard or outstanding academic contribution in the relevant field(s); and
- iii) Atleast 5 years' experience of teaching/conducting and/or guiding research in fields relating to educational planning and administration or atleast 5 years' administrative/professional experience in Government in relevant field;
- iv) Proven merit in writing/editing/documentation/publication work.

Desirable

Specialisation in one or more of the following areas

- i) Institutional planning and school based management
- ii) Educational administration with special reference to organisation, structure and functioning of school system
- iii) Monitoring and evaluation of educational programmes/projects
- iv) Local level educational planning and management.
- v) Education of special groups like minorities and deprived communities.
- vi) Training methods and organisation of long term training programmes.

Applicants should mention one or more specialisation for which they would like to be considered.

Deputation/Transfer

- A) Officers/Academics from Central or State Governments, Universities, professional and research institutions and bodies:
 - i) holding analogous post on regular basis; or
 - ii) with 5 years regular service in post in the pay scale of Rs. 2200-4000 from government source or 5 years regular service as Lecturer or in post in the pay scale of Rs. 2200-4000 or equivalent and
- B) Possessing qualifications prescribed for direct recruits as mentioned above.

Note 1 : In case of persons drawn from administrative cadres the condition (ii) under essential conditions apply but there should be evidence of academic and innovative contributions in the field of educational planning and administration.

2. The benefit of additional years of service under Rule 30 of CCS (Pension) Rules, 1972 shall be admissible on fulfilment of all the conditions under these rules in the case of direct recruits.
3. Candidates already in employment under government/semi-government organisations/autonomous bodies should send their applications through proper channel.
4. Other things being equal, preference will be given to SC/ST candidate.
5. Candidates from outside Delhi called for interview will be paid single return second-class train fare by shortest route.

Applications from candidates fulfilling the required eligibility conditions alongwith attested copies of certificates, a recent passport size photograph and a non-refundable crossed postal order or Rs.20/- (not required in the case of SC/ST candidates) drawn in favour of the Registrar, National Institute of Educational Planning and Administration, 17-B, Sri Aurobindo Marg, New Delhi-110016 should reach upto 7-1-97

The Institute reserves the right to alter/modify any of the terms and conditions regarding Qualification/Experience.

— dayp 1192(8)96

**P.R.R. Nair
REGISTRAR**

BOOK REVIEW

Terse and Abstruse

M. V. Pylee

Upendra Baxi. *Marx, Law and Justice*. Bombay, N.M. Tripathi Private Ltd. Pp. 203 Rs. 200/-.

This is a scholarly work. As the blurb states, its genesis is the series of lectures the author delivered at the Kerala Law Academy, Thiruvananthapuram in 1980. The V.K. Krishna Menon Lectures were conceived in the pre-perestroika milieu and was a study in the liberal tradition of understanding State, Society and Law through jurisprudence.

During the period in which this work was developed further, the collapse of the Soviet System and the Socialist States of Eastern Europe took place and it must have had its impact on the author. However, it seems that the author believes that even in the changed context, the Marxian mode of understanding and analysis of State, Society and Law is critically relevant to the last decade of this century, especially in India and other developing countries in their painful march to capitalist mode of production.

From a limited standpoint of jurisprudence which the mainstream Marxian corpus has by and large ignored, this work endeavours to suggest the importance of retrieval of Marxian insights. And from the standpoint of a more specifically Indian experience, it invites attention to the

need for understanding Indian development from a perspective different from that of liberal tradition and vision.

The author continues to believe, even in the present changed context, that only excessive Eurocentrism as well as "superficial obscene sycophancy of alleged unipolarism of the world" make possible ways of thought which seem to make Marxian modes of understanding obsolescent. It is his belief that Marx and Marxian modes of understanding remain relevant to tasks of struggle in many parts of the world still far away from the agendum of managing contradictions of late capitalism. Even if contemporary history of transformation in former Soviet Union and East European countries may well-nigh be considered by some as irreversible, any global conclusion concerning total irrelevance of Marxian modes of understanding and analysis is "audacious and unhistoric". It is the author's firm belief that the basic notions of exploitation, class, hegemony, ideology, contradiction, relative autonomy of State and the socialist legality furnish a rich, even if problematic repertoire for imaginative understanding of human hopes and hazards in a rapidly changing world system. Maybe future might well summon us to apply Marx's thesis of Feuerbach: philosophers have understood

the world; the task however is to change it to Marxian tradition itself; Marxians have sought to change the world. The task, however, now is to understand what Marxian tradition is !

The book is divided into eight chapters :

(1) Namboodiripad, Hidayatullah, Menon and Marx, (2) The law as a tool : the Tyranny of a Metaphor, (3) The Materialist Theory of Law, (4) The Death and Rebirth of Distributive Justice. (5) The Law as Terror and the Law as Ideology, (6) On Ideology: Some Jurisprudential Explorations. (7) Law as Ideology and the Ideology of Law and (8) The Relative Autonomy of the State and Law. The Index of the book is divided into two parts : Index of Names and Thematic Index, a novel and striking method of indexing indeed.

The most interesting and readable chapter of the book is chapter - 1 which briefly gives the details of the case of contempt in which Chief Minister Namboodiripad was involved. In a press interview he said that Marx and Engels considered the judiciary as an instrument of oppression and that the judges are dominated by class hatred, class interests and class prejudices, that when evidence is balanced between a well dressed pot-bellied rich man and a poor, ill dressed and illiterate person, a judge instinctively favours the former. Careful not to cast any aspersions on judicial integrity, he defied judicial authority. The High Court of Kerala found him guilty of contempt and he was fined Rs. 1000 or simple

*Former Vice Chancellor, University of Cochin, HMT Colony, Kalamassery, Cochin - 683 503.

imprisonment for one month. On appeal, the Supreme Court upheld the High Court's verdict but reduced the fine to Rs. 50 only.

The Supreme Court decision and Chief Justice Hidayatullah's observations that Namboodiripad was wrongly quoting Marx and Engels and attributing to them what they did not say about judges gives the author the springboard of action to enter into an elaborate study on the Marxian concept of State, Law and Justice.

As you enter Chapter 2 the reading becomes difficult and the chapters which follow one after another become more terse and

abstruse. One gets the impression that the author wanted to make this work as arduous and and unintelligible as *Das Capital* itself and put the reader into a crisis of nervous rationality. It is often said that the quality of good writing is its easy readability. From that point of view it is unlikely that this work will be appreciated. Baxi has every right to parade his scholarship through the most abstruse enunciations of his interpretation of Marxian mode of understanding and analysis of Marxian thought of State, Society, Law and Justice. But he should not subject even an interested reader to endless boredom.

Praiseworthy

V. Gangadhar*

J C Paul. *Consolidated Financial Statements of Holding Companies*. New Delhi, S. Chand & Co., 1995. Pp. 232. Rs. 80.00.

The book under review is a good piece of work. This topic as such assumes greater importance in view of privatisation, globalisation associated with recent industrial policy of Govt. of India. This book has been divided into ten chapters. Various legal requirements of holding company accounts and different methods for accounting for the Group are presented in the book. A number of illustrations are included with a view to providing practical outlook to the readers. Issues pertaining to payment of dividend, issue of bonus shares, disposal of shares in subsidiary company are

discussed in the book, the effort put in by the author is praiseworthy.

However, this venture could have been more useful had the author considered the following aspects:

1. In chapter I, "Introduction", the following aspects may be included.

— More details about the need and importance of business expansion, need for growth, mergers and consolidation, nature of group accounts as distin-

guished from individuals business enterprises.

— A comparative picture of legal requirements of group accounts in India and U.K.

2. The title of the second chapter may be renamed as "Methods of Group Accounts".

Further, before the methods are discussed it may be more appropriate if a suitable classification of various methods is adopted.

3. "Consolidated Balance Sheets" and "Consolidated Profit & Loss Accounts" are discussed in Chapter III and VII respectively. However, it may be more appropriate if they are presented in succession, i.e. in Chapter III and Chapter IV.

4. Chapter X is exclusively devoted for "Solved Problems and Exercises." However, they may be included in the relevant chapters so that the readers can have a better understanding of the issues discussed in various chapters.

5. In general, in the beginning of each chapter, it would be more useful to the readers if appropriate conceptual background regarding the topic is provided.

If these suggestions are considered, the utility of the book may further increase. However, these limitations may not in any way undermine the practical utility of the book. This book is useful to students, academicians, executives and especially professionals in the area of Finance Accounting.

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*Principal, University Postgraduate College, Kakatiya University, Subedari, Warangal - 506 001, Andhra Pradesh.

THESES OF THE MONTH

A list of doctoral theses accepted by Indian Universities

HUMANITIES

Philosophy

1. Bhattacharjee, Santi Prasad. **Unification of ideas of creation and evolution of the universe in Western scientific view and Indian philosophical literature.** NBU, Dr P Roy, Department of Philosophy, University of North Bengal, Raja Rammohunpur, District Darjeeling.

2. Das, Ram Dhani. **Kabir ka adhyatmik manavatavad : Ek darshanik anusheelan.** Veer Kunwar,

3. Dhar, Benulal. **Moral values and intersubjectivity : A phenomenological understanding.** NBU, Dr Ranjan Kumar Ghosh.

4. Hemjith Balakrishnan, P. **A critical appraisal of A J Ayer's phenomenalism as a form of realism.** Calicut, Dr A Kanthamani, Reader, Department of Philosophy, University of Calicut, Calicut.

5. Sharma, Uma Shankar. **Manav jeevan ke vikas mein sangit ka yogdan : Saundarya shastra ke sandarbh mein.** Durgavati,

6. Tomy, C A. **Mind and cognition : A study on the philosophical foundations of cognitive science.** Hyderabad, Dr A Das Gupta, Reader, Department of Philosophy, University of Hyderabad, Hyderabad.

Fine Arts

Music

1. Gopala Swamy, Uma. **A study of sangita sampradaya pradarsini.** Bangalore, Dr Padma Murthy, Prof (Retd), Department of Performing Arts, Bangalore University, Bangalore.

Language and Literature

English

1. Bansod, Deepa. **The theme of alienation in the novels of Ernest Hemingway.** Devi Ahilya, Dr R K Bajpayee, 71, Mangalam Apartment, Palasiya, Indore.

2. Choudhury, Soumyabrata. **Pragmatics of death and modes of individuation in the Figurations of Socrates, Antigone Jesus.** JNU, Prof H S Gill, Centre for Linguistics and English, Jawaharlal Nehru University, New Delhi.

3. Motwani, Prem. **Social order tradition and change in Meiji fiction : A study of the selected writings of Mori Ogai and Natsume Soseki.** JNU, Prof P A Narasimha Murthy, Centre for East Asian Studies, Jawaharlal Nehru University, New Delhi.

4. Padmaja, T V S. **English language teaching at P U/ Intermediate levels : A comparative study with reference to materials, methods and modes of evaluation.** Bangalore, Dr S K Rangacharya, Prof, Department of English, Bangalore University, Bangalore.

5. Patil, Smita Satish. **A thematic study of Joseph Conrad's descendants.** S Gujarat, Dr F A Inamdar, Department of English, South Gujarat University, Surat.

6. Vaidya, Shruti. **Anita Desai and Nayantara Sehgal : A feminist study.** HP,

7. Verma, Charu. **Feminism in Third World contemporary fiction : A comparative study of selected works of Gabriel Garcia Marquez, Ngugi Wa Thiong and Bhisham Sahni.** HP, Sanskrit

1. Kansra, Aneeta Kumari. **Bhas virchit Pratima natak : Ek sameekshatmak adhyayan.** HP,

2. Khan, Mohammed Harun. **Kalidasa and William Shakespeare : A comparative evaluation regarding certain aspects viz; treatment of plot, society, description of nature, imaginations and universality.** Nagpur, Dr Pankaj Chande, Reader, Department of Sanskrit and Dean, Faculty of Arts, Nagpur University, Nagpur.

3. Mamtesh Lata. **Acharya Kuntak ka vakrokti siddhant evam Kalidas ke natya kritiyon mein unka prayog : Ek sameekshatmak adhyayan.** HP,

4. Mukhopadhyay, Somnath. **Sayaniya Rigvedabhasye mimamsa samaya sameeksha.** Burdwan, Prof Gopal Nath Bhattacharyya, Department of Sanskrit, University of Burdwan, Burdwan.

5. Patel, Hemrajibhai Ramabhai. **Conception of bhakti-rasa in Sanskrit poetics and bhakti shastra : A critical study.** N Gujarat, Dr M I Prajapati, Arts and Commerce College, Thara.

6. Sharma, Ram Chand. **Mahabharat ke Aranyaparvagat kriya ropon ka bhashik adhyayan.** HP,

7. Shivashankara, M. **Contribution of Nilakantha Dikshita to Sanskrit literature.** Bangalore, Dr K Rajagopalachar, Prof (Retd), No 684, 11th 'A' Main, V Block, Jayanagar, Bangalore.

8. Shrivastava, Deepa. **Mahabharat mein Anushasan Parva ka alochnatmak parishaheelan : Manusmriti evam Yagyavalkya Smriti, Ramayan, Mahabharat, Srimadbhagwat ke tulnatmak pariprekshya mein.** Ghasidas, Dr J N Dubey, C M Dubey College, Bilaspur.

9. Sinha, Madhabi. **Vivekanander Vedanta chinta sambandhe sarvik alochana.** Burdwan, Prof G G Mukhopadhyay, (Retd), Department of Sanskrit, University of Burdwan, Burdwan.

10. Urmila Devi. **Kahemendra pranit Vrihatthamanjari ka sameekshatmak adhyayan.** HP,

Prakrit

1. Prajna, Samani Sthit. **Sambodhi : Ek sameekshatmak anusheelan.** Jain Vishva Bharati, Dr Hari Shanker Pandey, Asstt

Prof, Department of Prakrit Language and Literature, Jain Vishva Bharati Institute, Ladnun.

Hindi

1. Dwivedi, Ila. Hindi ke lalit nibandhkar aur Vidya Niwas Mishra ka pradeya. Ghasidas, Dr (Smt) Kusum Saxena, Principal, Govt New Girls College, Bilaspur.

2. Kharate, Madhukar Shankarrao. Sathottari Hindi gazalon ka kathya. N Maharashtra, Dr M G Saraph, Near Municipal High School, Jamner Road, Bhusawal, District Jalgaon.

3. Kulshreshtha, Surendra Kumar. Dr Vrindavan Lal Verma ke aupanyasik nari patron ka manovaijanyak adhyayan. Bundelkhand, Dr Ram Swaroop Khare, Head (Retd), D V College, Urai.

4. Mahishwar, Hemlata. Premchand ke sahitya mein manav mulyon ka sandarbh. Ghasidas, Dr S C Shukla, C M Dubey College, Bilaspur.

5. Mishra, Jaishri. Samkaleen vyangya sahitya ke vividh paksh. Ghasidas, Dr R D Saxena, Govt Arts/Commerce P G College, Bilaspur.

6. Narsimha Rao, K. Dr Prabhakar Machave ke upanyason mein sam-samajik yathartha-bodh. Hyderabad, Prof Shashi Mudiraj, Head, Department of Hindi, University of Hyderabad, Hyderabad.

7. Parmodh Singh. Dushyant ka kavya : Vastu aur shilp. HP,

8. Rajan, V K. Short stories of Yashpal : A critical evaluation. Calicut, Dr P Balakrishnan, Prof, Govt Brennen College, Tellicherry.

9. Ram Prakash. Hindi ke pragatisheel alochana aur Dr Ramvilas Sharma. Hyderabad, Prof Shashi Mudiraj, Head, Department of Hindi, University of Hyderabad, Hyderabad.

10. Ray, Prahlad. Tulsi chintan ka dvandvatmak swarup. Dayanand, Rohtak. Prof H C Verma.

11. Rekha Kumari. Sant Sadaphal Dev : Vichar evam darshan. Veer Kunwar,

12. Sahu, Gayatri. Chhattisgarh mein prachalit panthi lokgeeton ka sanskritik annasheelan. Ravishankar, Dr Geeta Pathak, Department of Hindi, Govt Digvijai College, Rajnandgaon.

13. Shailja. Samkaleen Hindi kahani : Badalte jeewan

sandarbh. Burdwan, Dr B C Sinha, Department of Hindi, University of Burdwan, Burdwan.

14. Singh, Girijawati. Ramcharit Manas ke naveen prasangodbhavana ka vivechan. Bangalore, Dr Kuldeep Gupta, Department of Hindi, Bangalore University, Bangalore.

15. Tej Ram. Prasad ke natakon mein sanghrash. Dayanand, Rohtak. Dr Anand Kumar Gupta.

16. Tripathi, Mithilaprasad. Tulsi sahitya ke Ramkathanon ka tulnatmak adhyayan : Anya Ramkatha parak sahitya ke sandarbh mein. Devi Abiliya, Dr G D Tripathi, Hotel Anjora, Near Sapna Sangeeta Talkies, Indore.

17. Tripathi, Snehlata. Dr Harivansh Rai Bachchan ka kavya ka kavya shastriya adhyayan. Bundelkhand, Dr Ram Gopal Gupta, Head, Department of Hindi, Pt J L N College, Banda.

18. Zadgaonkar, A S. Acoustic distinctive features of Chhattisgarhi Segmentals. Ravishankar, Dr R C Mehrotra, Prof (Retd), School of Studies in Linguistics, Pt Ravishankar Shukla University, Raipur.

Urdu

1. Mohd Moynuddin Amar. Sub-Ras monthly annotated bibliography and its literary services. Osmania, Prof Ashraf Rafi.

2. Nikhat Ara. Urdu ke Mumtaz khwateen afsananigaron ka tanqidi mutala. AMU, Dr Khursheed Ahmad, Lecturer, Department of Urdu, Aligarh Muslim University, Aligarh.

3. Rehana Parveen. A critical study of domestic Urdu novels. Osmania, Prof S Yousuf Sharifuddin, Department of Urdu, Osmania University, Hyderabad.

4. Saffiya Bee. The contribution of Maulana Shibli to biography in Urdu. Calicut, Dr S E A Nadvi, Head, Department of Arabic, University of Calicut, Calicut.

5. Zubaida Begum. Biswin sadi mein Urdu tanz-o-mizah. Bangalore, Dr M Nooruddin, Prof, Department of Urdu, Bangalore University, Bangalore.

Bengali

1. Bakshi, Madan Mohan. Rabindranath-O-Bangali jeeban: Shiksha, swadesh bhabana-O-dharma. Burdwan, Dr (Mrs)

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Examination	Original date of Commencement	Revised date of Commencement
III B.A./B.Com./B.Sc.	21.11.1996	2-12-1996
II B.A./B.Com./B.Sc.	30.11.1996	11-12-1996
I B.A./B.Com./B.Sc.	10.12.1996	19-12-1996

Individual communications in this regard are being sent to the candidates and they are advised to collect their Hall-tickets at the respective centres of examinations as per the revised schedule.

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Sumita Chakraborty, Department of Bengali, University of Burdwan, Burdwan.

2. Kundu, Manindralal. *Bangaleer natyachatanar kramobikash : Adiyug theka madhya-unobinsha satabda. D Litt. NBU,*

3. Pramanik, Santanu. *Ajit Datta : Jiban ebang kabya O anyanya rachana sameekaha O mulyabichar. NBU, Dr S C Lahiri, Department of Bengali, University of North Bengal, Raja Rammohunpur, District Darjeeling.*

Marathi

1. Deshpande, Prabha Narayan Rao. *Dr S R Kulkarni : A critical evaluation of his literary works. Osmania, Dr (Mrs) Shobha Deshmukh, Reader, Department of Marathi, Osmania University, Hyderabad.*

2. Karmarkar, Vinita. *K Chintamanrao Kolhatkar kal ani krititva. SNTD, Dr Tara Bhawalkar, 3, Snehdeep, Ambedkar Road, Sangli.*

3. Kulkarni, Kanchanmala Baburao. *Lokagitatan avishkrit jhaleli shaktipeethe. Osmania, Dr Usha Joshi, Prof (Retd), Osmania University, Hyderabad.*

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1. Mehta, Alpa Rameshchandra. *Foregrounding parallelism and deviation : A study with special reference to the poetry of Sunraram, Niranjan Bhagat, Jayant Pathak, Ravji and Ramesh Parekh. Baroda,*

Manipur

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Kannada

1. Bali, Meenakshi. *Kadacol Madivalappa and his disciples : A study. Gulbarga, Dr M S Lathe, Institute of Kannada Studies, Gulbarga University, Gulbarga.*

2. Shetty, Suneeta M. *Shivarama Karantara kadambarigalalli stree. Bombay, Dr T Vasanthakumar, Prof and Head, Department of Kannada, University of Bombay, Bombay.*

3. Sreenivasa Murthy, J. *Kannada kavya bhashe matthu samakrita. Bangalore, Dr K V Narayana, Department of Kannada, Bangalore University, Bangalore.*

4. Suresh, H K. *Kannadadalli Kalidasana kruthigalu. Bangalore, Dr H S Venkatesh Murthy, Head, Department of Kannada, St Joseph's College of Commerce, 163, Brigade Road, Bangalore.*

5. Wari, Mallappa Goolappa. *Sode Arasu Manetana : Ondu adhyayana. Karnatak, Dr B R Hiremath, Prof, Department of Kannada, Karnatak University Post Graduate Centre, Belgaum.*

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2. Hanumantha Rao, K. *Sri Kandukuri Veeresalingam garu navalalu : Samajika viluvalu. Andhra,*

3. Neeraja, A. *Pratibha-Imagination tulnatmak pariseelana. Hyderabad, Prof G V Subrahmanyam, Department of Telugu, University of Hyderabad, Hyderabad*

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5. Visalakshmi, Y A. *Telugulo smruthi sahityamu Bharadwaja rachanalu*. Osmania, Prof N Gopal, Department of Telugu, University College of Arts and Social Science, Osmania University, Hyderabad.

Geography

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History

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3. Chauhan, Gajinder Singh. *Historical geography of Haryana upto 1200 A D*. Dayanand, Rohtak.

4. Kar, Rekharani. *Freedom movement in Orissa with special reference to Sambalpur*. Manipur, Prof S N Pandey, Department of History, Manipur University, Imphal.

5. Mohd Khalid Hussain. *Bhartiya Rashtriya Andolan mein Subhash Chandra Bose kee bhumika*. Ghasidas, Dr S K

Tripathi, Prof, Govt P G College, Ambikapur.

6. Nambirajan, M. *Archaeology of Goa region*. Karnatak, Dr A Sundara, Director, Karnatak University Post Graduate Centre, Bijapur.

7. Panda, Barid Baran. *Socio economic condition of South West Bengal in the nineteenth century*. Burdwan, Prof P K Chatterjee, Department of History, University of Burdwan, Burdwan.

8. Rai, Mamta. *Bharat Chhoro Andolan mein Bilaspur Anchal ke yogdan ka aitihasik anusheelan*. Ghasidas, Dr R G Sharma, Department of History, C M Dubey College, Bilaspur.

9. Rana, Hemlata. *Anglo-Maratha sambandh tatha Maratha shakti ka prabhav*. Ghasidas, Dr S K Tripathi, Govt P G College, Ambikapur.

10. Savitri Devi. *Foreign influence in Indo-Gangetic Divide from 200 B C to 650 A D*. Dayanand, Rohtak. Prof (Mrs) Neelima Dahiya.

11. Sharma, Abha. *Impact and use of science and technology in agriculture in India, 1858-1905*. Kurukshetra,

12. Shobha. *Rural life in Northern India during early mediaeval period, C 650-1206 A D*. Dayanand, Rohtak. Prof (Mrs) Neelima Dahiya.

13. Venkateswara Rao, G. *Peasant movements in Venkatagiri zamindari, 1903-1949*. Osmania, Dr A Satyanarayana.

14. Yarlagadda, Tejaswini. *Rural settlements and social stratification in South Western Deccan, 1000 A D - 1200 A D*. Hyderabad, Dr Aloka Parasher Sen, Reader, Department of History, University of Hyderabad, Hyderabad.



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